Infrastructure Financing through Islamic Finance in the Islamic Countries

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<tbody>
<tr>
<td>AAOIFI</td>
<td>Accounting and Auditing Organization for Islamic Financial Institutions</td>
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<tr>
<td>ABS</td>
<td>Asset-backed securities</td>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>AfDB</td>
<td>African Development Bank</td>
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<tr>
<td>AUM</td>
<td>Assets under management</td>
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<tr>
<td>A&amp;P</td>
<td>Asia and Pacific</td>
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<tr>
<td>BCBS</td>
<td>Basel Committee on Banking Supervision</td>
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<tr>
<td>BMT</td>
<td>Baitul maal wa Tamwil</td>
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<td>BNM</td>
<td>Bank Negara Malaysia (Central Bank of Malaysia)</td>
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<tr>
<td>BOT</td>
<td>Build-Operate-Transfer</td>
</tr>
<tr>
<td>BOOT</td>
<td>Build-Own-Operate-Transfer</td>
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<tr>
<td>CBN</td>
<td>Central Bank of Nigeria</td>
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<tr>
<td>CBOS</td>
<td>Central Bank of Sudan</td>
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<tr>
<td>DBFO</td>
<td>Design-Build-Finance-Operate</td>
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<tr>
<td>DBFOM</td>
<td>Design-Build-Finance-Operate-Maintain</td>
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<tr>
<td>DCMF</td>
<td>Design-Construct-Manage-Finance</td>
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<tr>
<td>EPC</td>
<td>Engineering, Procurement and Construction</td>
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<tr>
<td>ESG</td>
<td>Environment, social and governance</td>
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<tr>
<td>ETF</td>
<td>Exchanged traded funds</td>
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<tr>
<td>G20</td>
<td>Group of Twenty</td>
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<tr>
<td>GCC</td>
<td>Gulf Cooperation Council</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GLC</td>
<td>Government-linked Companies</td>
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<td>IBI</td>
<td>Islamic banking institutions</td>
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<tr>
<td>ICIEC</td>
<td>Islamic Corporation for the Insurance of Investment and Export Credit</td>
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<td>ICMA</td>
<td>International Capital Market Association</td>
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<td>ICT</td>
<td>Information communication technology</td>
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<tr>
<td>IDB</td>
<td>Islamic Development Bank</td>
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<tr>
<td>IFC</td>
<td>International Finance Corporation</td>
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<td>IFIs</td>
<td>Islamic financial institutions (IFIs)</td>
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<td>IFSA</td>
<td>Islamic Financial Services Act (Malaysia)</td>
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<td>Islamic Financial Services Board</td>
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<td>IIFM</td>
<td>International Islamic Financial Markets</td>
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<td>IIIB</td>
<td>International Islamic Infrastructure Bank</td>
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<td>IILM</td>
<td>International Islamic Liquidity Management Corporation</td>
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<td>IIMM</td>
<td>Islamic Interbank Money Market</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IRTI</td>
<td>Islamic Research &amp; Training Institute</td>
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<tr>
<td>KSA</td>
<td>Kingdom of Saudi Arabia</td>
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<td>MDBs</td>
<td>Multilateral Development Banks</td>
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<tr>
<td>MECA</td>
<td>Middle East and Central Asian region</td>
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<tr>
<td>MENA</td>
<td>Middle East &amp; North Africa</td>
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<td>MIGA</td>
<td>Multilateral Investment Guarantee Agency</td>
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<td>MRT</td>
<td>Mass Rapid Transit</td>
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<td>NBFIs</td>
<td>Nonbank Financial Institutions</td>
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<tr>
<td>ODA</td>
<td>Overseas Development Assistance</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>OIC</td>
<td>Organisation of Islamic Cooperation</td>
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<tr>
<td>OJK</td>
<td>Financial Service Authority (Indonesia)</td>
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<tr>
<td>O&amp;M</td>
<td>Operations and Management</td>
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<tr>
<td>PCGs</td>
<td>Partial Credit Guarantees</td>
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<tr>
<td>PFI</td>
<td>Private Finance Initiative</td>
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<td>PPIAF</td>
<td>Public-Private Infrastructure Advisory Facility</td>
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<tr>
<td>PPP</td>
<td>Public Private Partnership</td>
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<td>PRGs</td>
<td>Partial Risk Guarantees</td>
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<td>PRI</td>
<td>Political risk insurance</td>
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<td>PSIA</td>
<td>Profit Sharing Investment Accounts</td>
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<td>PSIFIs</td>
<td>Prudential and Structural Islamic Financial Indicators</td>
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<td>PSP</td>
<td>Private-Sector Participation</td>
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<td>REITs</td>
<td>Real Estate Investment Trusts</td>
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<tr>
<td>ROT</td>
<td>Rehabilitate-Operate-Transfer</td>
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<tr>
<td>SAMA</td>
<td>Saudi Arabian Monetary Agency</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium enterprises</td>
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<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
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<tr>
<td>SPV</td>
<td>Special Purpose Vehicle</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<tr>
<td>WEF</td>
<td>World Economic Forum</td>
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</tbody>
</table>
Executive Summary

Infrastructure is key to the proper functioning of an economy, promoting economic growth and alleviating poverty. Estimates on infrastructure investment needs show that most countries will face huge financing gaps. While the cumulative global investment requirements over the period of 2016-2040 is estimated to be USD 93.7 trillion, the global infrastructure investments will be around USD 78.8 trillion, and, with current trends of investment, that will leave a shortfall of investments of USD 14.9 trillion over the same period.¹ The status of overall infrastructure and its quality in OIC member countries is relatively poor on average, compared most of the other regional groupings. The investment requirements for a sample of 13 OIC member countries for which data is available is estimated at USD 7.2 trillion during 2016-2040. With current trends, however, the investments are estimated to be USD 5.6 trillion, which will result in a deficit of USD 1.6 trillion for these countries. Since a sound infrastructure framework will be key to the implementation of Sustainable Development Goals (SDGs), there is a need to seek resources to fill this gap.

Given the features of infrastructure projects that are usually large and requiring huge investments, the sector has been traditionally financed by governments. However, the large financing needs and gaps coupled with budget deficits and increasing public debt impose limits on governments in financing the sector. Since investments in the infrastructure sector will be an important factor in achieving the SDGs in many OIC member countries, there is a need to seek funds from alternative sources to fill financing gaps. In this regard, domestically the private sector and the non-profit sector can be important sources of financing and externally funding from multilateral developmental banks and institutions such as sovereign wealth funds can potentially provide additions funds. With global Shariah compliant assets exceeding USD 2 trillion in 2017, the Islamic financial industry has become large and systematically important in several OIC member countries (IFSB 2018). In line with the ideological standing of its ethical, social and legal ethos of promoting overall welfare (maslaha), the Islamic finance industry can potentially play an important role in providing financing for infrastructure projects which provide essential services, promote growth and alleviate poverty.

The aim of this research is to assess the role of Islamic finance in providing financing to the infrastructure sector and suggest policy recommendations to enhance its contribution. The study examines the overall environment for infrastructure financing and the role that different stakeholders (such as government-linked companies, financial institutions, capital markets, the social sector, and international multilateral institutions) can play in providing Shariah compliant infrastructure financing. Using information from a sample of five OIC member countries (Indonesia, Malaysia, Nigeria, Saudi Arabia and Sudan) and the United Kingdom, the research presents the status of using Islamic finance and suggests policy recommendations to further enhance the contribution of Islamic finance in the development of the infrastructure sector.

The status of infrastructure in five OIC member countries and the UK examined in this research is varied. While UK, Malaysia and Saudi Arabia have relatively good overall infrastructure, its status in Nigeria and Sudan is relatively underdeveloped and Indonesian infrastructure shows moderate development. In all the countries included in the study, the government still plays an important role in infrastructure development. However, there is an

¹ Global Infrastructure Hub and Oxford Economics (2018)
increasing trend of involving the private sector through PPP arrangements. While Malaysia has involved the private sector to fund infrastructure projects extensively, Saudi Arabia and Sudan have taken initiatives to engage the private sector relatively more recently.

The size of the Islamic financial sector in the sample countries is also varied. Whereas Sudan’s whole financial system is Islamic, in Saudi Arabia, Islamic banking is more than 50% of the banking assets and the corresponding figures of Islamic banking share for the other countries are 30% for Malaysia, 5.6% for Indonesia and 0.28% for Nigeria. The results show that the Islamic banking sector has played a relatively small role in financing infrastructure projects in all countries studied. Islamic banks in the sample OIC countries invested an average of 4.3% of their assets in infrastructure related sectors. The reason for low involvement in infrastructure investments may be due to the liability structure of banks which mainly constitutes liquid short-term deposits and the high regulatory capital requirements for long-term investments.

The Islamic nonbank financial institutions are relatively small in size and contribute little to the infrastructure sector in the sample OIC member countries. The takaful sector constitutes a small share of the Islamic financial industry and appears to not contribute much towards infrastructure investments. For example, the takaful sector in Sudan constitutes only 2.3% of financial sector assets and does not directly invest in the infrastructure sector. Malaysia and Saudi Arabia have a large pension and sovereign wealth funds that have investments in the infrastructure sector along with other sectors. While no specific information is available on the Islamic component of these funds in Saudi Arabia, in Malaysia the two key pension funds have significant Shariah compliant investments.

In all countries in the sample, the Islamic capital market has been used to raise funds to either cover government budget needs and/or infrastructure projects. The option of using sukuk for infrastructure development appears to be attractive, even in countries where the share of the Islamic banking sector is small (such as in Indonesia, Nigeria and the UK). Malaysia has robust Islamic capital markets and has raised significant funds for infrastructure development over the years by issuing sukuk. Islamic social finance can potentially be an alternative source for providing social infrastructure services. In some sample countries such as Malaysia and Saudi Arabia, the legal and regulatory framework limits the contribution of these sectors. While waqf has been used in some countries to provide health and education services, Indonesia has developed innovative models of using zakat to provide electricity to the poor.

The key issues and policy recommendations that can increase Islamic finance provisions for infrastructure projects at different levels are presented below.

**Infrastructure Related Strategy and Policies**

The huge needs for infrastructure development on the one hand and the large financing gaps that most countries face on the other hand require developing appropriate strategies and plans to identify the pipeline of sustainable and viable infrastructure projects that can contribute to economic growth and poverty alleviation. The case studies show that while some countries have long-term visions and then incorporate infrastructure development plans to achieve them, other countries have medium/short term plans to develop infrastructure projects. It is recommended that governments develop longer-term strategies and then prepare medium and short-term plans specifically for infrastructure development by incorporating sustainability perspectives in all projects to achieve SDGs. An independent
national infrastructure body such as the National Infrastructure Commission in the UK may be better able to provide an independent and objective assessment of projects by taking into consideration the long-term needs of the economy and identifying the ones that should be prioritized for implementation of national development.

The second aspect of the national level policy framework for infrastructure development is to have an institutional setup that can facilitate investments by the private sector. Setting up a specific public agency or an independent authority with responsibilities for implementing PPP projects could enable the involvement of the private sector in infrastructure development. The PPP regime can be further strengthened by other supportive arrangements such as providing advisory services to private sector stakeholders and guaranteeing the implementation of PPP contracts by the government.

**Legal and Regulatory Framework**

Increasing the contribution of Islamic finance in infrastructure development would require laws that can improve the legal regime governing PPP arrangements on the one hand and instituting enabling laws and regulations that can promote the Islamic financial industry on the other hand. While country case studies show different ways in which laws and regulations related to PPP and concessions are implemented, providing a clear legal framework that can mitigate uncertainties and encourage private sector financing using PPP is essential. The development of the Islamic financial industry would require enabling Islamic financial laws for different Islamic financial sectors (banks, nonbank financial institutions and capital markets). These are needed for Islamic finance to have a legal basis to operate in the country and provide different types of products that can be used for long-term infrastructure financing. Since infrastructure projects are large and complex, investments using Islamic finance can be enhanced by developing standardized templates of Shariah compliant contracts that can be used in project financing as these can reduce transaction costs and legal risks.

**Government and Government Linked Companies (GLCs)**

While governments still play an important role in developing infrastructure projects, many countries establish government-linked companies (GLCs) that are responsible for developing and providing infrastructure services. The country case studies show that governments and infrastructure-linked GLCs have raised funds by issuing sukuk in capital markets. In some countries, government-linked financial institutions (GLICs) such as sovereign wealth funds or government pension funds also provide financial resources for infrastructure projects. Some GLICs provide equity in other infrastructure-related GLCs and also contribute to the sector by investing in project related sukuk. To facilitate the mobilization of resources in a more organized manner, this study suggests establishing a National Infrastructure Investment Bank (NIIB) that can invest in projects by raising funds by issuing sukuk and/or arranging syndicated financing. NIIB can also provide advisory services to facilitate increasing the financing of infrastructure by the private sector.

**Financial Institutions**

While Islamic banks form the bulk of the Islamic financial sector, the case studies show that their involvement in infrastructure projects has been relatively small with an average of 4.3% of the total Islamic banking assets going to the sector in five countries examined in the study.
This may be due to their balance sheet structure with shorter-term and liquid liabilities and regulatory regimes that require higher capital requirements for long-term investments. One option to encourage Islamic banks to contribute more to infrastructure projects would be to distinguish between deposits and restricted investment accounts such as in the case of Malaysia. Since the latter tend to be longer term and the investors bear the risks of investments, these will be more suitable for investments in infrastructure projects.

The balance sheet features of nonbank financial institutions (NBFIs) may be more suitable for long-term financing. However, the Islamic NBFI sector constituting takaful operators, investment banks, pension funds, etc. have not contributed significantly to infrastructure development. This is partly because the Islamic NBFI sector is relatively small and most of the larger NBFIs such as pension funds and sovereign wealth funds are conventional. While a few of the conventional NBFI in Malaysia provide Shariah compliant financing in some infrastructure projects, the overall Islamic financing provided by the NBFI sector has been small. Although increasing the size of Islamic NBFI can potentially expand investments in infrastructure projects, the government can also initiate a Shariah compliant infrastructure fund that can raise funds from both Islamic and conventional NBFIs for investments in infrastructure projects. This fund can be managed by the NIIB mentioned above.

**Capital Markets**

Since large amount investments are needed to finance infrastructure projects, the capital market is an obvious source to raise funds from different types of investors. The country case studies show that both government and infrastructure-related GLCs have raised funds by issuing sukuk for infrastructure projects. While some governments such as Indonesia, Saudi Arabia and Sudan have issued sukuk to raise funds to cover their budgetary expenditures (which is also used in the infrastructure sector), in some other cases governments and GLCs have issued project-specific sukuk. Indonesia and Malaysia have also issued retail sukuk to tap into new sources of funds. However, in order to use sukuk as an instrument to raise funds for infrastructure projects from both institutional and retail investors, the sukuk market needs to be developed. This can be done by providing an enabling legal and regulatory environment and a supportive market infrastructure for the sukuk market to flourish. Since issuing sukuk is complex and expensive, it is recommended that a GLC be established (similar to Sudan Financial Services Company Ltd.) that can provide advice on structuring, developing standardized templates for, and assisting in the issuance of sukuk at lower costs.

**Islamic Social Sector**

A key untapped source that has the potential for providing social infrastructure services is the Islamic social sector constituting zakat, waqf and sadaqat. For example, estimates of zakat collections in the Muslim world show that it can potentially be between USD 114.34 billion and USD 304.9 billion annually. While the promise of using these sources is great, they have not been used extensively partly because they are not organized and managed efficiently. The country case studies show several ways in which the Islamic social sector (zakat and waqf) can contribute to providing certain infrastructure services. In particular, waqf has been used in Malaysia and Saudi Arabia to provide medical services to the poor and Indonesia has issued Cash Waqf Linked Sukuk to raise charitable funds for use in public projects such as schools and hospitals. Similarly, BAZNAS and UNDP have used zakat funds to develop micro hydro-electricity projects in Indonesia to provide electricity to the deprived segments of the
population. The research recommends developing innovative models of zakat and waqf to tap into additional resources for providing social infrastructure services.

**International Sources**

The Islamic Development Bank (IDB) is the only multilateral development bank providing Shariah compliant financing for infrastructure projects. IDB has also partnered with other multilateral development banks such as the Asian Development Bank to establish Islamic infrastructure funds. However, given the needs of OIC member countries, the amount of Shariah compliant funds available is relatively small. For example, since 2016, IDB has provided financing of an average of around USD 125 million per country. Given the other mandates of IDB beyond project financing, this study proposes the establishment of an International Islamic Infrastructure Bank (IIIB) that can act as a catalyst to mobilize funds to be invested in infrastructure projects. Other than providing financing, IIIB can also offer other technical assistance and advisory services to enhance the capabilities and skills needed in the development of infrastructure projects.

**Reduce Knowledge Gap and Capacity Building**

There is a need to reduce the knowledge gap on the use of Islamic finance for PPP projects and enhance the awareness among stakeholders to increase the use of Islamic finance for infrastructure projects. This can be done by developing detailed case studies and a data repository on Islamic PPP project financing from different parts of the world. Furthermore, there is a need to develop templates for Shariah structures that can be used for different infrastructure projects to encourage them to invest in the sector. Finally, there is a need to build capacity by developing executive training programs for stakeholders by using technical assistance from multilateral development organizations.

The key recommendations to enhance the role of Islamic finance in infrastructure development at different levels and the stakeholders responsible for implementing them are presented in the table below.
<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Responsible Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Recommendations for the Public Sector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Identify a pipeline of innovative sustainable projects that are essential for long-term economic growth</td>
<td>Relevant government ministries or a specialized public body</td>
</tr>
<tr>
<td>2.</td>
<td>Develop standardized Shariah compliant contract templates for infrastructure projects</td>
<td>Government agencies and regulators in collaboration with the Islamic Development Bank</td>
</tr>
<tr>
<td>3.</td>
<td>Establish a National Islamic Infrastructure Bank (NIIB)</td>
<td>Government establishes and provides the initial equity</td>
</tr>
<tr>
<td><strong>Key Recommendations for the Private Sector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Change Islamic banking law to establish restricted investment accounts in Islamic banks that can be used for longer-term investments</td>
<td>Relevant government ministry and bank regulators</td>
</tr>
<tr>
<td>5.</td>
<td>Establishment of a Shariah compliant infrastructure fund</td>
<td>Government can form a GLC or NIIB as suggested above that will drive the establishment and operations of the fund</td>
</tr>
<tr>
<td>6.</td>
<td>Establish a GLC that can advise on the structuring and issuance of sukuk</td>
<td>Government can form a GLC that will provide such services</td>
</tr>
<tr>
<td><strong>Key Recommendations for the Islamic Social Sector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Develop innovative models of using zakat and waqf for providing social infrastructure services</td>
<td>Zakat institutions, waqf institutions, government bodies and international organizations</td>
</tr>
<tr>
<td><strong>Key Recommendations for the International Stakeholders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Establish an International Islamic Infrastructure Bank (IIIB)</td>
<td>Multilateral organizations and/or large private sector organizations can take the lead to initiate the process and OIC member countries can provide the initial capital for establishing the IIIB.</td>
</tr>
<tr>
<td>9.</td>
<td>Build capacity and human capital for implementing Islamic infrastructure financing</td>
<td>Multilateral development organizations such as IDB, COMCEC or the proposed IIIB can provide the technical assistance for training professionals of Islamic financial institutions.</td>
</tr>
</tbody>
</table>
1 Introduction

1.1. Infrastructure Definition, Features and Role in Development

'Infrastructure' has origins in French with the meaning of 'the installations that form the basis for any operation or system' (Helm and Mayer 2016: 343). It is an umbrella term representing 'social overhead capital' (World Bank 1994: 2) providing 'services and support that are basic to the functioning of a community, organization, or society and crucial to its economic productivity' (Pratap and Chakrabarti 2017: 10). Infrastructure includes broad categories of assets producing public goods and services essential for the functioning and growth of economies and can be categorised in different ways. While one way to view it is in terms of its features as hard (physical) and soft (organisational and social), another way is to categorise it according to the sector such as economic and social. Economic infrastructure includes the energy, telecom, transport and water, and sanitation sectors that are used by both businesses and households (OECD 2014: 8). A sub-set within the economic infrastructure is ‘network sectors’ that include transport (roads, highways and railways), electricity and telecommunications (Egert et.al 2009). Social infrastructure entails education, health, social housing and community services used mainly by the household sector. The focus of this research is on both physical economic and social infrastructures.

Although the types and features of infrastructure assets are diverse and varied, there are some common elements that they share. Infrastructure involves investment in capital intensive assets that are usually large, lumpy, indivisible and take a long time to build. Once built, they are long-lasting and produce services for a long period of time. The large investments in fixed capital assets in the initial stages of infrastructure projects produce increasing returns to scale. This makes many infrastructures projects natural monopolies whereby the costs of production decreases as the output increases. If the private sector provides the services in the absence of price controls, possibilities of them reaping monopoly profits can arise. Some infrastructure projects produce services that have features of public goods (Pratap and Chakrabarti 2017). A public good or service can be viewed in two ways. First, it is something that a government considers its responsibility to provide or ensure its provision (World Bank 2017c: 12). Second, in academic literature public good is discussed in contrast to private goods. Whereas consumption of a private good reduces its supply and excludes others, public goods have features of non-rivalry and non-excludability. In other words, use of a public good such as a road by an individual does not reduce its use or availability for others. Given the nature of public goods and services, market mechanisms fail in their provision since they inhibit the private sector from charging prices/fees from users (Chan et. al 2009).

A related feature of infrastructure is that they produce externalities. Although most infrastructure projects produce positive externalities, they can also result in negative externalities. For example, building a highway enables people to move around and also increases trade and business. However, excessive use of highways can produce traffic jams and pollution that can harm the environment. Thus, when assessing the overall feasibility of infrastructure projects, social costs/benefits must be factored in along with private costs/benefits. Thus, market failures occur in cases in which infrastructure projects are natural monopolies producing public goods and services that have externalities.

Infrastructure sectors are also interconnected and can produce network benefits. The network effects relate to externalities and can occur in different ways. This can happen within one
sector when the effectiveness of activity of one party is enhanced when others join the network. For example, a telecommunications network increases the usefulness of a single user when other users also join the network. The other aspect of network effects has to with the complementarity of different types of infrastructure investments whereby a disruption in one sector impacts the provisions of other sectors. For example, trains running on electricity will be affected by the lack of a supply of power. The network benefits can also be enhanced with more economies of scale. For example, the provision of different types of infrastructure such as transportation, energy, utilities, sewerage, schools, etc. would be feasible if the targeted population is larger (Grimes 2010). Key features of infrastructure projects are presented in Table 1.1.

Table 1.1: Features of Infrastructure Projects

<table>
<thead>
<tr>
<th>Features</th>
<th>Explanations</th>
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</thead>
<tbody>
<tr>
<td>Large, lumpy, indivisible</td>
<td>Infrastructure projects are usually large and indivisible</td>
</tr>
<tr>
<td>Capital intensive with high sunk costs</td>
<td>Investments in infrastructure projects require huge funds that are sunk since once invested they are not recoverable. For example, once investments are made on a dam to generate hydro-electricity, the funds cannot be recovered.</td>
</tr>
<tr>
<td>Long gestation period</td>
<td>Being large, infrastructure projects take a long time to build.</td>
</tr>
<tr>
<td>Long payback period</td>
<td>Given the large investments and long lives of infrastructure assets, the payback period is long.</td>
</tr>
<tr>
<td>Natural monopoly characteristics</td>
<td>Large upfront investments in fixed costs in most infrastructure projects introduce economies of scale making them natural monopolies.</td>
</tr>
<tr>
<td>Public good characteristics</td>
<td>Many infrastructure projects produce goods and services that have features of public goods.</td>
</tr>
<tr>
<td>Non-tradability of output</td>
<td>For some infrastructure projects, the services have to be provided at specific places limiting their substitutability. For example, a road connecting two cities has to be physically built in the country and cannot be imported.</td>
</tr>
<tr>
<td>Large externalities</td>
<td>Infrastructure projects generally produce externalities. While most of them produce positive externalities, they can also result in negative externalities.</td>
</tr>
<tr>
<td>Interconnected network systems</td>
<td>Several infrastructure sectors are interconnected forming a network. A disruption in one sector impacts the provisions of other sectors.</td>
</tr>
</tbody>
</table>

Sources: Pratap and Chakrabarti (2017) and OECD (2014)

1.1.1. Infrastructure and Development

Infrastructure is the key to the proper functioning of an economy, promoting economic growth and alleviating poverty. The role of infrastructure in affecting the economy can be identified in different ways. First, infrastructure provides basic and essential services such as transportation, power, water, sanitation, etc. to the household sector. These services have positive externalities as they not only satisfy the needs of essential services such as clean water and power, they also help provide job opportunities and encourage business activities. Second, infrastructure can be considered as a separate input in the aggregate production function or as a factor that lowers the costs and enhances productivity in the business sector.
Power, transport and water are considered key inputs for economic activity and the provision of these at lower costs can reduce production and transport costs that lead to economic growth. Furthermore, infrastructure enables market access and can also have a competition-enhancing effect. By providing basic services, infrastructure can raise the productivity of both human and physical capital and encourage more private investment which increases jobs and income levels (Egert et al. 2009, Grimsey and Lewis 2004: 20, UNEP 2016: 6).

Overall, infrastructure investments improve the comparative advantage of economies by promoting domestic and international trade and increasing efficiency. For example, transport infrastructure significantly increases economic efficiency directly by reducing costs and indirectly by lowering the need to hold large inventories (Henckel and McKibbin 2010). As development takes place with the support of infrastructure, economies move up the value chain, and the requirements of infrastructure need to change to support changing production patterns and structures.

Empirical studies generally support the positive role of infrastructure in promoting growth and reducing poverty. World Bank (1994: 2) estimates that a 1% growth in the stock of infrastructure is associated with a 1% increase in gross domestic product (GDP). Using data from 121 countries over the period of 1960-2000, Calderon and Serven (2004) find a positive relationship between larger infrastructure assets and growth. They also find a close association of better infrastructure quantity and quality with improvements in income equality. They estimate that if the Latin American countries were to have similar infrastructure quantities and qualities as the region’s leaders, the long term per-capita growth would increase by 1.1% to 4.8% annually and Gini coefficients would decline between 0.02 to 0.10. For East Asian economies, the gains of catching up with the infrastructure of median countries would be even larger with increases in growth ranging from 3.2% to 6.3% per annum and a decrease of Gini coefficients between 0.05 to 0.13. Similarly, Calderon (2009) finds that if all African countries were to have the infrastructure stock and quality of the region’s leader (Mauritius), economic growth would increase by 2.2% per annum on average. In an empirical study done on 76 advanced and emerging economies, Seneviratne and Sun (2013) also find that better quantity and quality infrastructure improves income equality.

While there is general agreement on the positive role of infrastructure on growth, the importance of the type of sectors and their impact on the economy can vary at different stages of development. It is likely that the impact of additional overall investment in the sector on the economy would be lower in developed countries that have a higher infrastructure stock relative to those with lower stocks (Estache and Garsous 2012). In a study on different states in India, Misra (2015) shows that social infrastructure (health and education) has a greater impact on development than economic infrastructure (water, electricity and roads), which implies that the former should be given more attention in developing economies. With the growth of economies, however, the share of certain infrastructure sectors such as transport, energy and telecommunications would increase (World Bank 1994: 2-3).

Moving forward, in the era of the Paris Accord on Climate Change and Sustainable Development Goals (SDGs), the notion of sustainable infrastructure will become increasingly important. The sustainability features of infrastructure projects relate to their quality in terms of their impact on poverty reduction and environmental sustainability. The SDGs that would be directly impacted by the availability of economic and social infrastructure are shown in Table 1.2. Whereas SDG 9 (Industry, innovation and infrastructure) directly deals with building a
sustainable infrastructure, the other SDGs reflect some of the infrastructure sectors. For example, SDG 6 relates to the development of the water and sanitation infrastructure and SDG 7 would require the development of the energy sector. Similarly, achieving SDG 3 would depend on the availability of the health infrastructure and SDG 4 on education infrastructure. It should be noted the SDGs 13 (*Climate action*), 14 (*Life below water*) and 15 (*Life on land*) impose a qualitative overlay of sustainability on all types of infrastructure projects.

**Table 1.2: SDGs and Infrastructure Types and Quality**

<table>
<thead>
<tr>
<th>Infrastructure Types &amp; Quality</th>
<th>Relevant SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Infrastructure</strong></td>
<td>SDG 9: <em>Industry, innovation and infrastructure</em></td>
</tr>
<tr>
<td><strong>Economic Infrastructure</strong></td>
<td>SDG 6: <em>Clean water and sanitation</em></td>
</tr>
<tr>
<td></td>
<td>SDG 7: <em>Affordable and clean energy</em></td>
</tr>
<tr>
<td></td>
<td>SDG 11: <em>Sustainable cities and communities</em></td>
</tr>
<tr>
<td><strong>Social Infrastructure</strong></td>
<td>SDG 3: <em>Good health and well-being</em></td>
</tr>
<tr>
<td></td>
<td>SDG 4: <em>Quality education</em></td>
</tr>
</tbody>
</table>

*Source: Author’s own*

A key factor in the achievement of the SDGs in most countries would be the existence of supporting sustainable infrastructure. Sustainable infrastructure ‘minimises unintended social, environmental and economic risks and offers additional benefits, which are related to achieving the Sustainable Development Goals, e.g. in the field of job creation, poverty alleviation, participation, gender, climate change, biodiversity, or financial benefits for the public’ (Wiener and Didillon 2016: 6). Thus, sustainable infrastructure projects will have a triple-bottom line that is ‘economically, socially and environmentally sustainable’ and would integrate the environment, social and governance (ESG) aspects into all phases of project implementation (World Bank 2008; McKinsey 2016: 8). From a sustainability perspective, investments in infrastructure would require not only increasing the quantity of investments but also improving its quality in terms of avoiding negative externalities. For example, provision of clean energy and transportation services to the rural poor where the bulk of the population lives in many developing countries would enhance production in microenterprises and also reduce the use of wood as a source of energy. On the contrary, while a fossil fuel based power plant can generate electricity which can enhance production, it can also add to pollution (negative externality) that can be harmful to the community and environment. Similarly, the transportation infrastructure in big urban areas could focus on developing low-emissions and energy efficient mass-transit transit systems instead of developing traditional roads (IFC 2018a).

**1.2. Brief Overview of Global Infrastructure Needs and Financing Gaps**

The current status of the SDG9 which directly relates to infrastructure and overall infrastructure quality for different income-level country groupings and OIC member countries (MCs) is shown in Chart 1.1.² The chart shows that while the current index value of OIC countries is achieving SDG9 (24.3) and infrastructure quality (39.6) is relatively better than the lower income and lower-middle income countries, they still need significant improvements

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² Note that the regional and income-level country groupings include OIC member countries. However, they are dispersed in these groupings according to their income status and geographical locations.
to achieve the status of high income countries that have scores of 65.8 and 72.7 for SDG9 and quality of infrastructure respectively.

**Chart 1.1: Status of SDG9 and Infrastructure Quality**

![Chart 1.1: Status of SDG9 and Infrastructure Quality](image)

*Source: Bertelsmann Stiftung and Sustainable Development Solutions Network (2018)*

**Chart 1.2: Infrastructure Status of Regions and OIC Members**

![Chart 1.2: Infrastructure Status of Regions and OIC Members](image)

*Source: WEF Global Competitive Index Historical Dataset 2007-2017*

Chart 1.2 shows the status of the overall infrastructure and its quality in OIC member countries and different regions. While the index of the overall infrastructure in OIC countries (3.6) is better than Sub-Saharan Africa (2.9) and South Asia (3.4), it is lower than all other regions. Similarly, the quality of infrastructure of OIC countries (3.7) is lower than all other regions except Latin America and Caribbean (3.5) and Sub-Saharan Africa (3.2). The relatively low
status for OIC MCs underscores the point that there is a need to make huge investments in the infrastructure sector to achieve growth and attain the SDGs.

McKinsey (2017) reports that a total of USD 3.79 trillion was spent on economic and social infrastructure globally during 2015. The breakdown of the infrastructure spending across different sectors during the year is shown in Chart 1.3. The chart shows that while the bulk of the funds going to the economic infrastructure accounts for USD 2.54 trillion, USD1.25 trillion (or 33% of the total) was spent on social infrastructure. The largest expenditure in economic infrastructure was in the transportation sector (USD 1,089 billion or 28.7% of the total) followed by the power sector (USD 785 billion or 20.7% of the total) and telecom sector (USD 430 billion or 11.3% of the total).

**Chart 1.3: Global Infrastructure Spending by Asset Class 2015 (USD billion)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Spending (US$ billion)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>1,089</td>
<td>28.7%</td>
</tr>
<tr>
<td>Power</td>
<td>785</td>
<td>20.7%</td>
</tr>
<tr>
<td>Water</td>
<td>236</td>
<td>6.2%</td>
</tr>
<tr>
<td>Telecom</td>
<td>430</td>
<td>11.3%</td>
</tr>
<tr>
<td>Social infrastructure</td>
<td>1,250</td>
<td>33.0%</td>
</tr>
</tbody>
</table>

Source: McKinsey (2017: 1)

Different estimates of the needs of infrastructure investments globally identify huge gaps, particularly in relation to achieving the SDGs. The Global Commission on the Economy and Climate estimates that a total of USD 90 trillion (or USD 6 trillion a year) would be needed during 2015-2030 globally for investments in urban, land use and energy systems (GCEC 2014: 8 and GCEC 2016: 8). In a study done in 2016, McKinsey (2016: 10) reports that USD 93 trillion would be needed for investments in sustainable infrastructure during 2015-2030, of which funding in economic infrastructure would amount to USD 49.1 trillion (or USD 3.3 trillion annually). In an updated report, McKinsey (2017) revised the estimates of global investment in economic infrastructure for the period 2017-2035 to a total of USD 69.4 trillion, raising the annual investment requirements to USD 3.7 trillion. The distribution of the investment needs in different economic infrastructure sectors for 2017-2035 is shown in Chart 1.4. The chart shows that most of the investments in the economic infrastructure during the period would go to the transport sector (USD 29.7 trillion or 42.8% of the total) followed by the power sector (USD 20.2 trillion or 29.1% of the total). The report further indicates that the annual spending is likely to increase by an additional USD 1 trillion per year to meet the SDGs.
The regional distribution of the investments in economic infrastructure during 2017-35 is shown in Chart 1.5. Close to one-third (34%) of the total USD 69.4 trillion investment for the period is expected to be in China and one-fifth is expected to be in the United States. Many developing regions such as Africa, the Middle East and emerging countries in Asia will have a relatively smaller share of investments during the period.

In a recent study of 50 countries representing 85% of the global GDP, the Global Infrastructure Hub and Oxford Economics (2018) estimate that, at current trends of investment, the cumulative global infrastructure investments would be around USD 78.8 trillion over the period of 2016-2040. With investment needs of USD 93.7 trillion, this would imply a shortfall of investments worth USD 14.9 trillion over the period (see Chart 1.6).
1.3. Aim, Objectives and Research Methods

Given the features of infrastructure projects that are large with long gestation periods, the sector has traditionally been financed by the public sector. The provision of infrastructure by the government was justified because the services were considered essential, large amounts of investments were required, and projects had features of natural monopolies (Chan et al. 2009). However, increasing demands on public funds, budget deficits, and increasing public debt have limited their role in financing the sector. Furthermore, there have been issues of efficiency of provisions of infrastructure services by the government. As discussed above, the projections show that the demand for infrastructure is expected to grow further in the future, in particular, due to the implementation of SDGs. With limited resources available to the governments of most countries, there is expected to be huge investment gaps. Given the need for funds, there will be a need to seek resources from different sources to fill the funding gaps. In this regard, domestically the private sector and the non-profit sector can be important sources of financing, and, externally, funding could be secured from multilateral developmental financial institutions and sources such as sovereign wealth funds. To enable these stakeholders to contribute to infrastructure development, however, would require a well-functioning financial sector that can facilitate the mobilization of resources to fill the gap.

The Islamic financial sector has grown significantly during its short history with the size of the global assets exceeding USD 2 trillion in 2017 (IFSB 2018). The sector has become large in many OIC MCs and has become systematically important in several countries. Based on the overall broader objective of the Shariah in enhancing benefit (maslahah) and avoiding harm (mafsada), the key features of the Islamic financial system include risk-sharing, direct linkages with the real economy, low leverage and not dealing with toxic instruments and derivatives (Ahmed 2009, El-Hawary et al. 2004). In line with the ideological standing and its ethical, social and legal ethos, the Islamic finance industry can potentially play an important role in providing financing to infrastructure projects since they provide essential services and also promote growth and alleviate poverty.
Given the role of infrastructure in economic growth and alleviating poverty, and its current status and financing gaps, the overall objectives of the study are as follows:

- Provide background information on the nature of infrastructure projects and the challenges of financing them;
- Explore the potential of Islamic finance for infrastructure financing by examining the products and approaches;
- Identifying the different sources of Islamic finance for infrastructure investments such as financial institutions and markets, public-private partnerships and international multilateral institutions;
- Analyse the prospects and challenges facing infrastructure financing using Islamic finance in selected OIC countries;
- Providing policy recommendations to enhance the role of Islamic finance in promoting investments in the infrastructure sector.

1.3.1. Methodology

The key methods to collect information/data for the study are content analyses of various documents and literature and also surveys of countries used as case studies. Other than collecting quantitative data related to the size and status of infrastructure financing needs and the Islamic financial sector in different jurisdictions, some of the information is qualitative in nature. The sources of qualitative data and information include policy documents from international organizations and standard setting bodies, national level public policy and legal/regulatory documents, and academic publications on infrastructure financing. Information on the strategic approaches and legal and regulatory framework for infrastructure financing and product structures are collected by carrying out content analyses of relevant public documents and literature.

The study uses case studies of five OIC countries (Indonesia, Malaysia, Nigeria, Saudi Arabia and Sudan) and one non-OIC country (United Kingdom) to have an in-depth examination on the role of Islamic finance in promoting infrastructure development. Different criteria are used for choosing countries for case studies. First, to ensure regional diversification, countries from three OIC regions (Africa, Arab and Asia) are included. Second, countries with different levels of development in terms of income group classifications of the World Bank are also included. The countries selected for case studies belong to lower-middle income, higher-middle income and higher income groups. The third criterion is the size of the Islamic financial industry. Since infrastructure financing by Islamic finance is expected to be in countries with relatively mature Islamic financial sectors, countries for case studies are selected with relatively larger Islamic financial sectors but at different levels of development. Finally, as financial sectors are influenced by legal regimes, countries are chosen so that there is diversity in legal systems. Legal regimes can be broadly classified as those that are based on Islamic law, common law and civil law. The countries included for case studies and their features according to the criteria presented above are shown in Table 1.3.
Table 1.3: List of OIC Countries to be Used for Case Studies

<table>
<thead>
<tr>
<th>Country</th>
<th>Region</th>
<th>Legal Family(^c)</th>
<th>System</th>
<th>Income Grouping</th>
<th>Size of IF sector: % of National Banking Assets(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Indonesia</td>
<td>Asia</td>
<td>Civil Law</td>
<td>Lower Middle Income</td>
<td>5.6(^b)</td>
<td></td>
</tr>
<tr>
<td>2. Malaysia</td>
<td>Asia</td>
<td>Common Law</td>
<td>Upper Middle Income</td>
<td>30.0(^c)</td>
<td></td>
</tr>
<tr>
<td>3. Nigeria</td>
<td>Africa</td>
<td>Common Law</td>
<td></td>
<td>0.28(^d)</td>
<td></td>
</tr>
<tr>
<td>4. Saudi Arabia</td>
<td>Arab</td>
<td>Islamic/Civil Law</td>
<td>High Income</td>
<td>51.1</td>
<td></td>
</tr>
<tr>
<td>5. Sudan</td>
<td>Africa</td>
<td>Islamic/ Common Law</td>
<td>Lower Middle Income</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

\(^{a}\)Data for 2017H1 (source IFSB 2017) except otherwise indicated; \(^{b}\)-Data for 2017 (source OJK 2017); \(^{c}\)-BNM (2017); \(^{d}\)-Central Bank Nigeria; World Bank (2004). Note that the countries are classified according to legal origins such as English, French, etc. While the English are considered to be common law, the latter belongs to civil law regimes.

While most of the information/data is collected from secondary sources, useful information is also gathered for country case studies through interaction with relevant personnel and officials in their respective countries. Information and data will also be gathered through interviews and discussions with relevant officials and stakeholders to further understand the country specific issues related to the use of Islamic finance in infrastructure development.

The research is descriptive and evaluative and attempts to arrange, summarize and present data/information to enable meaningful interpretation. Other than analyzing quantitative data on the size and status of the infrastructure financing needs and the Islamic financial sector in different jurisdictions, some of the analyses will be qualitative and conceptual in nature. The analyses will produce material that can identify deficits in the infrastructure investment needs, identify the role of Islamic finance in filling these gaps, and come up with appropriate policy recommendations.

1.4. Overview of the Study

Other than this introduction chapter, the research report has five additional chapters. A brief overview of the contents of these chapters is given below.

Chapter 2: Infrastructure Financing

Chapter 2 discusses various issues related to infrastructure financing. The chapter starts by identifying the special features of infrastructure financing and then covers issues related to infrastructure planning. After discussing the sources of infrastructure financing, the products and approaches for infrastructure financing are presented. The chapter ends by examining the factors affecting financing long-term infrastructure projects and then identifying infrastructure needs and financing gaps in OIC MCs.
Chapter 3: Islamic Finance as an Alternative Source for Long-Term Infrastructure Financing

The third chapter begins with presenting the principles of Islamic finance relevant to infrastructure investments and then providing an overview of the Islamic financial industry. The roles of different sectors within the Islamic financial industry such as Islamic banking, Islamic capital markets/sukuk, nonbank financial institutions, and social sectors in contributing to infrastructure investments are then discussed. For each of these sectors, an overview of the contacts/structures/approaches that can be used to finance projects and a critical evaluation of the challenges and prospects in financing infrastructure projects is provided. After presenting the role of public-private partnerships and international initiatives, case studies on the involvement of some Islamic financial sectors in financing infrastructure is provided to support the arguments.

Chapter 4: Case Studies of Selected Countries

As indicated, the study plans to undertake case studies of five OIC MCs (Indonesia, Malaysia, Nigeria, Saudi Arabia and Sudan) and one non-OIC country (United Kingdom). For each country, information and analysis on the following topics is presented (if they exist and are available): Islamic Finance Industry Overview, Total current status and projected investments in infrastructure sectors, national level policies and framework related to infrastructure development, legal and regulatory framework for infrastructure investments, and the role of different Islamic financial sectors (Islamic banks, capital markets, Islamic nonbank financial institutions, social sector, public-private partnerships and international sources) in contributing to infrastructure finance.

Chapter 5: Policy Recommendations

After identifying the issues from the literature and country case studies, this chapter provides policy recommendations under the following broad headings: infrastructure related strategy and policies, legal and regulatory framework, government and government-linked companies, financial institutions, capital markets, Islamic social sector, and multilateral institutions.

Chapter 6: Conclusion

After highlighting the infrastructure financing gaps, the status of Islamic finance and its role in financing infrastructure investments along with the experiences from the country case studies will be presented. The concluding part of the chapter will highlight the key policy recommendations that can enhance the contribution of the Islamic finance industry in infrastructure development.


2 Infrastructure Financing

2.1. Special Features of Infrastructure Financing

The features of infrastructures projects include having a large scale, wide breadth and longer duration (Helm and Mayer 2016). Being large, they require huge investments that few private sector entities can manage. The breadth of infrastructure in terms of impact is wide since a large number of people benefit from the services provided which have features of public goods. Similarly, the projects have longer maturities compared to projects most private sector investors would prefer. Given these factors, infrastructure has traditionally been provided by the government mainly through budget allocation and debt. However, with demands for public funds for other needs, governments face budgetary constraints and rising public debt levels. Thus, there is a need to diversify funding sources and the private sector is expected to play an increasingly important role in the development and provision of infrastructure services. Other than raising alternative sources of funds, one of the key benefits of involving the private sector is to increase the efficiency of infrastructure projects (Ehlers 2014). The private sector is expected to implement projects at lower costs than the public sector, and this can save resources which can have alternative uses. Attracting private sector engagement in infrastructure, however, would require providing the right environment and incentives for them to invest. In this regard, the structural hurdles of investing in infrastructure projects need to be minimized and the beneficial risk-return features need to be highlighted (Jobst 2018).

Chan et. al (2009) distinguishes between the investment, funding and financing of infrastructure projects. Investments in infrastructure involve the identification of projects that produce high community welfare. The criteria used to identify projects to invest would be to consider those that produce the highest benefits relative to costs. As indicated, the benefits and costs would not only focus on profitability but also on the net social benefit of the projects. Financing involves raising funds from different sources for the construction of infrastructure assets. The efficient financing of infrastructure would involve choosing financings modes that reduce the overall cost of financing over the lifetime of the projects. One way to minimise the costs of financing is to assign the project risks to those who are able to manage them the best. The funding of infrastructure relates to how a project is funded during its lifetime (not only in the construction phase but also in the operational phase). For example, public funding may have to cover the gap of revenues and costs of some infrastructure projects through subsidies from the government budget. However, funding issues will not be of a concern for a sustainable project that generates adequate revenues to cover costs.

Investments in infrastructure projects can be carried out by the government or the private sector, or they can be done under public-private partnership (PPP) arrangements. To understand the conditions under which the private-sector would participate in infrastructure projects would require examining the nature of these projects, the basic contractual structures, and the issues arising in financing them.

2.1.1. Project Phase and Contractual Structures

Infrastructure projects can be distinguished as *greenfield* and *brownfield*. While the former involves the development of new assets, the latter is the upgrading of existing assets. Involvement of the private sector in infrastructure can be viewed in terms of the functions they
perform at the different stages of the development of a project as identified below (World Bank 2017c: 6).

**Design:** Preparing the developing project plan in terms of initial concept, input and output requirements for construction. In this planning stage, the details of project assets and how they will be financed will be delineated.

**Build or Rehabilitate:** Greenfield projects would involve building new assets and brownfield projects would rehabilitate existing assets.

**Finance:** Depending on the contractual arrangements, the private sector has to finance all or part of the costs of building or rehabilitating projects.

**Maintain:** The infrastructure assets have long lives and have to be maintained. The role of the private sector in the maintenance of the assets will be specified in the contract.

**Operate:** Depending on the nature of infrastructure assets and the services produced, the contracts will determine the role of the private sector in operating the infrastructure projects. Types of contractual arrangements may involve the following: technical operation of the project and the provision of services to a government-related off-taker; technical operation of the project and the provision of services to direct users; and the provision of support services for operations with the government offering services to the end-users.

Given the above, different types of contracts can be used to involve the private sector in infrastructure projects. Table 2.1 shows the contracts that can be used to engage the private sector for developing and operating infrastructure projects covering different functions.

**Table 2.1: Contract Types Used for Infrastructure Projects Involving Private Sector**

<table>
<thead>
<tr>
<th>Contract Type</th>
<th>Design</th>
<th>Build</th>
<th>Rehabilitate</th>
<th>Finance</th>
<th>Maintain</th>
<th>Operate</th>
<th>Asset Typea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build-Finance-Operate-Maintain (DBFOM)</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>GF</td>
</tr>
<tr>
<td>Design-Build-Finance-Operate (DBFO)</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>GF</td>
</tr>
<tr>
<td>Design-Construct-Manage-Finance (DCMF)</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>GF</td>
</tr>
<tr>
<td>Build-Operate-Transfer (BOT)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>GF</td>
</tr>
<tr>
<td>Build-Own-Operate-Transfer (BOOT)</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>GF</td>
</tr>
<tr>
<td>Rehabilitate-Operate-Transfer (ROT)</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>BF</td>
</tr>
<tr>
<td>Concession</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>GF,BF</td>
</tr>
<tr>
<td>Private Finance Initiative (PFI)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>GF</td>
</tr>
<tr>
<td>Operations and Management (O&amp;M)</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>BF</td>
</tr>
</tbody>
</table>

a: GF-greenfield; BF-brownfield;  
*Source: Adapted from World Bank (2017c: 7)*
2.1.2. Public Private Partnerships (PPPs)

Four broad areas related to the development of infrastructure projects include the supply of inputs, purchase of outputs through off-take or purchase agreements, construction, and operations. While these activities can be carried out by the government, the private sector can also be involved. Public-private partnership (PPP) is defined as “a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility and remuneration is linked to performance.” (World Bank 2017c: 5). World Bank (2017c) identifies three broad parameters that can describe PPPs. The first relates to the types of assets involved which can be new (greenfield) or existing (brownfield). The second involves the functions that the private party is responsible for in the PPP arrangement. These can be identified as design, build or rehabilitate, finance, maintain and operate as discussed above. The contacts that can be used under PPP would be a combination of these as shown in Table 2.1.³ The third aspect of the PPP arrangement relates to how the private party is paid. The payment mechanism for the private party comes from the performance of the project asset and is collected as fees/tariffs from either service users or the government or both. Examples of the former can be a toll-road where users pay for using the road, and the latter may be seen in payments by the government for effective delivery of hospital care (World Bank 2017c: 6-8).

There are two other ways in which the private sector becomes exclusively involved with infrastructure projects. A full divestiture involves privatization of a brownfield infrastructure facility whereby a private firm buys an equity stake in the project. The change in the ownership of the project transfers the responsibility of investment, operations and maintenance, and all associated risks to the private entity. A merchant greenfield project is initiated by a private party on its own bearing all the operational and commercial risks without any revenue or payment guarantees from the government.

2.1.3. Structure and stakeholders in infrastructure projects

Being large projects, infrastructure investment and development involves different stakeholders and relationships which make their contractual structures complex OECD (2014: 9). Figure 2.1 shows the basic infrastructure investment frameworks identifying the contractual relationships between key stakeholders. The sponsors or shareholders of infrastructure projects create a special purpose vehicle (SPV) as a Project Company that deals with different stakeholders and carries out the various aspects of development and operations. By establishing an SPV which acts as a separate bankrupt remote legal entity, the private sponsors of the project deal with the project and separate the party's assets and liabilities from that of the infrastructure project. The assets of the project sponsors are ring-fenced by establishing a bankruptcy remote SPV that owns the project. This creates the appropriate incentives for the project sponsors to initiate large projects without risking their own assets. The Project Company signs an appropriate contract with the relevant public procuring authority that provides the relevant authorisation to initiate the infrastructure project.

While the sponsors of the project provide the equity, debt financing sought from different financial institutions and markets finances the project development. Unlike corporate finance, a key feature of infrastructure investments is that financing is structured based on the cash

³ It should be noted that involvement in full divestiture, management/service contracts and financial lease contracts do not fall under PPP arrangements (World Bank 2017c: 10-11).
flow of the project itself and the liability of sponsors is limited to the equity capital and the financiers have no recourse to their assets. Since project financing has non-recourse features, the debt providers are to take security on all the project’s assets. Some risks that the SPV and stakeholders cannot manage are mitigated through guarantees and insurance to create incentives for financial institutions to provide debt financing. Rating agencies play an important role in intermediating debt by providing useful information on the credit features of the project. This is particularly true if the project company issues bonds to raise funds from financial markets (Engel et. al. 2010: 48).

The non-financial contracts relate to building, operations and maintenance. The Project Company undertakes the construction of the project by using the services of an Engineering, Procurement and Construction (EPC) Company through a building contract. After the project is completed, the Project Company may use the services of an Operations and Management (O&M) Company through a service contract. The O&M Company operates and manages the project by selling the services to the ultimate customers. It should be noted that in some cases the Project Company may take the role of EPC Company and undertake the construction responsibilities or operate/manage the project instead of assigning it to the O&M Company.

Figure 2.1: Stakeholders and Relationships in Infrastructure Development and Finance

Source: Adapted from Engel et al. (2010) and Miller and Morris (2008)

The issues arising for the key stakeholders at different stages of infrastructure development are shown in Table 2.2. In the design or planning stage, the equity investors make arrangements for debt financing. Since in the initial stages the risks of the projects are relatively higher and the term of the financing is longer, early debt investors require higher returns. The construction of the project is funded by equity and debt raised in the planning stage. If there are cost overruns, these have to be covered by raising either more equity or debt. In the operational phase, there are risks of cash flows, but once the revenues start to
come in the default risk diminishes. The refinancing of debt can be done by raising funds in the form of bank loans, issuing bonds, or getting government funds.

Table 2.2: Issues Arising in Different Phases of Infrastructure Projects

<table>
<thead>
<tr>
<th>Phase</th>
<th>Economic &amp; Contractual Issues</th>
<th>Financial Features</th>
<th>Potential Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>• Contracts signed with all stakeholders&lt;br&gt;• Guarantees and insurance secured&lt;br&gt;• Ratings secured from rating agencies</td>
<td>• Equity holders provide equity as sponsors&lt;br&gt;• Sponsors need to secure commitments for debt</td>
<td>• Equity investors can be construction companies, infrastructure funds, pension funds, etc.&lt;br&gt;• Debt investors can be either bond holders or banks providing loans/syndicated loans</td>
</tr>
<tr>
<td>Construction</td>
<td>• Right incentives for monitoring construction and keeping costs low</td>
<td>• High risk phase with no cash flows&lt;br&gt;• Total funds (equity &amp; debt) should be enough to cover the costs of this phase</td>
<td>• If further debt is raised, it is costly&lt;br&gt;• Equity investors may have to provide financing if needed</td>
</tr>
<tr>
<td>Operational</td>
<td>• Demand risk can result on the volatility of cash flows</td>
<td>• Positive cash flows&lt;br&gt;• Risk of default decreases</td>
<td>• Debt from the initial stage can be refinanced to reduce costs</td>
</tr>
</tbody>
</table>

Source: Adapted from Ehlers (2014: 5)

2.2. Products and Approaches for Infrastructure Financing

Key economic issues in involving the private sector in infrastructure financing and investment include exploring how revenue can be generated and costs can be reduced during the lifetime of the project (Chan et al. 2009). A key determinant of private sector involvement in infrastructure relates to the risk-return features of the projects. Accordingly, OECD (2014: 13) classifies infrastructure projects into the following three types.

3. **Fully self-sustainable projects**: This category of infrastructure includes those that can generate revenue that not only covers the costs of investments but also yields profits to the sponsors over the project’s operational life. Examples of infrastructure that fall in this category are power, energy, telecommunications and highway projects that can generate high toll-revenues.

4. **Partially self-sustainable projects**: The revenue of these projects comes from tariffs and fees paid by end-users that are controlled by the government. The prices are set on the goods and services and are not high enough due to public welfare reasons. Since the relatively lower prices and revenues make the projects unprofitable, the private sector engages in these infrastructure projects if supported by other remedial options such as grants, tax breaks or subsidies. The sectors that fall in this category include railways, urban light rails, water and sewerage.

5. **Financially unsustainable projects**: This type of infrastructure does not generate any revenue and, as such, is usually provided by the public sector. The social infrastructure such as schools, hospitals and public housing fall in this category. The private sector
can be involved in the construction of the facilities and would be paid by the government accordingly.

World Bank and PPIAF (2017: 3) discuss the notion of private-sector participation (PSP) which is broader than the concept of PPP which is used for large and costly projects. Some sectors such as water and electricity may have lower-barrier forms and can be provided by private participation of the SMEs, particularly in countries that are affected by fragility, conflict and violence (FVC). Examples of small scale providers include water kiosks, takers and private networks in the water sector; and solar home systems and isolated mini power grids in the electricity sector.

For private sector investors, infrastructure represents a separate investment class with unique risk-return features. Infrastructure financing can provide an attractive asset class for institutions that are looking for investments with longer time horizons. This will include institutional investors such as pension funds and infrastructure funds. One of the constraints for considering infrastructure as a separate asset class is the heterogeneity of projects with different contractual arrangements and risk-return implications (Ehlers 2014). One option for dealing with this issue is to have a harmonized regulatory framework that produces similar structures for projects belonging to different sectors. Furthermore, a sound rating system that can provide useful information on the credit status and default risks of projects can also help investors make decisions about investments.

2.2.1. Project Financing

One of the functions identified under PPP parameters relates to financing. Financing can take the form of corporate or project financing. Infrastructure investments using a corporate financing framework would take place when a project is developed by an existing company. In this case, the financiers will assess the credit rating and cash flows of the corporation to decide whether to invest in the project. Financing will appear on the balance sheet of the corporation and the financiers will have recourse to the assets of the company in case of default (GIFR 2016: 261-62). However, corporate financing is not feasible for large projects and is usually be done for projects that require relatively small amounts of investment.

For projects that require large investments, project finance is used to mobilize financing for infrastructure projects under PPP arrangements (World Bank et al. 2017: 26). Project financing is a specialized funding structure that involves the “creation of a legally independent project company financed with nonrecourse debt for the purpose of investing in a capital asset, usually with a single purpose and limited life” (Esty 2002: 6-7). Project companies are established as a special purpose vehicle (SPV) by the project sponsors specifically for the implementation of the project. Unlike corporations, the equity of project companies is owned privately by a few shareholders that are usually few in number with the average being 2.7 (Esty 2002: 7). Once the project sponsors establish the SPV for an infrastructure project under a PPP arrangement, it will typically raise debt to finance the projects.

Project companies use high leverage that can range from 60% to 85% with an average debt to total capitalization ratio of 70% (GIFR 2016: 262; Esty 2002: 7). From the financiers perspectives, project financing techniques require identification, mitigation and allocation of project risks among various stakeholders. As indicated, unlike corporate financing in which the debt is on the balance sheet of the corporation, in case of project financing the debt remains off-balance sheet for the sponsors. As the SPV is a separate legal entity and owns the project,
the lenders would have recourse to the project assets with limited or no recourse to the assets or cash-flows of the sponsors of the project.

2.2.2. Modes of Infrastructure Finance

There are two broad ways in which the funds for infrastructure finance can be raised from the private sector. First, financial institutions provide financing directly to projects in the form of equity or debt. Second, the Project Company raises funds through capital markets by issuing securities such as bonds. The contractual arrangements and the modes of financing that can be used in each of these cases are complex and need to be clearly specified for different phases of the project’s implementation. The modes of financing infrastructure projects can be broadly classified as equity, debt and hybrid structures. The types of instruments and their features in each of these categories are discussed below.\(^4\)

**Equity**

Two categories of equity investment that represent ownership interests can be identified in infrastructure projects. The first kind is unlisted equity provided by the project sponsors who may be infrastructure management companies, project developers, private equity funds, construction, and engineering companies who establish the project company in the form of an SPV and provide the initial capital for an infrastructure project. Being project shareholders, they take the risk of residual losses of the project. The second type is listed equity that raises funds from the market that are used in infrastructure projects. Examples of instruments in this category include listed infrastructure equity funds, utilities stocks, and other funds such as real estate investment trusts (REITs). A key distinguishing feature of the two types of equity is that, in the latter, the ownership interests can be sold on the market, something which cannot be done in case of unlisted equity.

**Debt**

The goal of the project company is to use a finance structure that minimizes the overall costs of the project. The finance costs are reduced by taking on debt since equity is more costly than debt. Thus, debt constitutes a significant part of project financing. There are estimates that the debt component of project financing can be in the range of 70% to 95% of the total. Higher leverage, however, increases the risks and, as such, can increase the cost of borrowing (World Bank 2017c: 41). Thus, from a public-policy perspective, the procuring authority has to ensure that the project company is adequately capitalized.

As in the case of equity, debt can be raised either from financial institutions or capital markets. While the former would be bank loans or syndicated loans, the latter can take various forms such as a project bond or asset backed securities. As indicated, infrastructure projects are non-recourse which means that creditors are paid from the revenue generated by the project. From the lenders’ perspectives, the quality of the project assets will determine their willingness to provide funds since their claims are secured by them. Although the costs of financing for infrastructure projects will depend on the credit-rating of the assets, often the lenders may ask for higher returns to mitigate the risks of a non-recourse lending structure.

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\(^4\) For a detailed discussion on various instruments used for infrastructure financing see OECD (2015).
The financiers can also seek additional guarantees and credit support from the SPV or other third parties. One option of lowering the costs of financing is for the governmental bodies to provide either the financing or guarantees for the project. Another way to lower the costs of debt-financing is by generating full or limited recourse financing by offering guarantees by entities with better credit ratings. For example, an established company with a good credit rating can provide a corporate guarantee for the debt that can lower the costs of borrowing. In case of a default, the lenders will have recourse to the balance sheet of the guarantor company. This will be done in relatively smaller projects to limit risk exposure of the corporations providing the guarantees.

Hybrid

The hybrid instruments can include various structures and offer investors varied risk-return investment profiles. Forms of hybrid instruments can include convertible bonds, preferred shares or mezzanine financing. Convertible bonds represent junior claims relative to other debt instruments and have the option of being converted into equity. While they provide protection against downside, investors can benefit from the upside of a growing concern by opting to convert bonds into equity. Due to the option of conversion, the coupon rates paid are usually lower than other forms of debt. Preferred equity is usually with perpetual instruments with debt-like features that can be issued by listed companies. Preferred stock holders have claims to missed dividends and do not dilute ownership. While the investors are subordinated to other debtors, they have priority in claims relative to the common stock holders. Mezzanine financing takes the form of subordinated debt that can take the form of a loan or a bond. Since the risks are higher, mezzanine debt provides yields that lie between senior debt and equity (OECD 2015: 31).

The specific operational models used for infrastructure financing depend on the features of individual projects. Furthermore, financing will also depend on the type of PPP structure used and the relationship between different stakeholders. Thus, it is difficult to identify the best default model for financing infrastructure projects and the choice of financing has to be evaluated on a case to case basis (Pescon 2017).

2.2.3. Features and Risks in Infrastructure Financing

Being large and complex, infrastructure projects introduce a multitude of risks. A key issue that determines the involvement of the private sector in infrastructure relates to the risk-return features of projects. Being large and involving many parties, infrastructure projects require complex legal arrangements that create various risks at different phases of implementation. Risks in infrastructure projects can be broadly categorized as political/regulatory, business and technical (OECD 2015b). Some of the specific risks that appear in infrastructure projects are identified in Table 2.3.

The distribution of the risks between the private sector and the public sector depends on the project features and contract type. Since the risks in infrastructure are numerous and complex, the government has to provide some mitigation to certain types of risks to encourage the participation of the sector through investments. In general, risks that can be controlled by the private sector either by using risk management tools or insurance should be transferred to the private sector (Ehlers 2014). The Project Company will use different mechanisms and instruments to mitigate these risks which may also require the services of private financial
institutions and insurers that can provide coverage for various commercial risks. A key risk that the government can reduce is political and regulatory risk by creating a stable and conducive environment that can encourage long-term and large investments. The contracts should identify clearly how the different risks will be distributed and the overall regulatory system should ensure that the terms of the contract are implemented throughout the project life.

Table 2.3: Risks Arising in Infrastructure Projects

<table>
<thead>
<tr>
<th>Risk Types</th>
<th>Explanation</th>
<th>Project Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction risk</td>
<td>Risks of design problems, delays in construction and cost overruns.</td>
<td>Construction and warranty phase</td>
</tr>
<tr>
<td>Operational risk</td>
<td>Risks arising from staff management, maintenance and operations.</td>
<td>Operations phase</td>
</tr>
<tr>
<td>Demand and Revenue risk</td>
<td>Risks of low demand and resulting low revenues.</td>
<td>Operations phase</td>
</tr>
<tr>
<td>Network risk</td>
<td>Risks arising from factors related to other stakeholders/elements in the network to which the project is related or dependent</td>
<td>Throughout the project’s life</td>
</tr>
<tr>
<td>Technological risk</td>
<td>Risk of technology malfunctions or it becoming obsolete</td>
<td>Throughout the project’s life</td>
</tr>
<tr>
<td>Financing/investment risk</td>
<td>Risk of the non-availability or higher costs of financing</td>
<td>Throughout the project’s life</td>
</tr>
<tr>
<td>Environmental risk</td>
<td>Risk of adverse environmental impacts and hazards</td>
<td>Throughout the project’s life</td>
</tr>
<tr>
<td>Force majeure risk</td>
<td>Risks arising from calamities and war</td>
<td>Throughout the project’s life</td>
</tr>
<tr>
<td>Political, sovereign (regulatory) risk</td>
<td>Risk of changes on regulations and other requirements related to the infrastructure project</td>
<td>Throughout the project’s life</td>
</tr>
</tbody>
</table>

Source: Chan et. al (2009: 15) and Grimsey and Lewis (2002).

The government can provide the right incentives to encourage the private sector to invest in infrastructure projects. This can be done either by providing price support to ensure a stable revenue stream or by providing guarantees to minimize risks. In the former, the government would ensure supply of inputs and/or purchase of output at certain fixed prices either directly or through providing subsidies (Ernst and Young 2008). Guarantees can also be provided to financial institutions providing financing to infrastructure projects by national or multilateral development agencies in the form of partial credit guarantees (PCGs) and partial risk guarantees (PRGs). For example, the Multilateral Investment Guarantee Agency (MIGA) of the World Bank Group provides political risk insurance (PRI) for both debt and equity (Matsukawa and Habeck 2007). Some public national bodies provide additional guarantees and insurance to cover equity and debt investments and trade. One of the benefits of guarantees and insurance is the improvement in credit ratings which can lead to lower borrowing costs and enable the securitization of assets. The distribution of risks among the public and private sector stakeholders under the key contractual arrangements are shown in Figure 2.2.
In order to attract private sector investment in infrastructure projects, there is a need to have risk mitigation techniques and instruments to reduce the risks of large and complex projects and make them manageable. OECD (2015b and 2017b) identifies three broad categories of policies and approaches that can be used to mitigate the risks in infrastructure projects. First, governments can influence the political and regulatory risks by instituting a sound legal and regulatory environment. Given the long-term nature of infrastructure projects, there is a need to have a stable and predictable environment to enhance the confidence of the investors to invest. Second, some of the business risks can be managed through contractual arrangements. For example, the technical risks can be mitigated by subcontracting the construction and operational aspects of the project to specialized and professional EPC and O&M companies that have good knowledge and know-how. Finally, risks that are exogenous and related to macroeconomic business cycles such as variations in interest rates and inflation can be mitigated by being transferred to other parties using certain risk mitigation instruments. The key instruments that can be used in this category include guarantees, insurance and some derivative products.

### 2.2.4. Development Levels and Infrastructure Planning

While there is general agreement on the positive role of infrastructure on growth, the importance of the type of sectors and their impact on the economy can vary at different stages of development. It is likely that the impact of additional infrastructure investment on economic development is higher in countries with lower infrastructure assets compared to those having higher infrastructure stock (Estache and Garsous 2012). A study on different states in India by Misra (2015) shows that social infrastructure (health and education) has a greater impact on development than economic infrastructure (water, electricity and roads) which implies that the former should be given more attention in developing economies. With the growth of
economies, however, the share of certain infrastructure sectors such as transport, energy and telecommunications would increase (World Bank 1994: 2-3).

### 2.3. Sources of Infrastructure Finance

The sources of infrastructure finance are broadly classified into two dimensions: domestic/international and public/private. The stakeholders in each of the broad categories of infrastructure financing sources are shown in Figure 2.3 and discussed below.

**Domestic-public Finance:** The domestic public sources for infrastructure financing includes government budgetary sources such as revenue in terms of taxes, duties and public borrowing. Further funds collected from natural resource concessions and user fees of certain infrastructure facilities can also be used to finance infrastructure projects.

**Domestic-private Finance:** This source of funds is provided by the financial sector which constitutes financial intermediaries and financial markets. The former have different financial institutions such as banks, insurance companies, pension funds, sovereign wealth funds, and other financial institutions (such as investment companies, private-equity funds, development banks and infrastructure developers and institutions). The financial institutions can provide funds in the form of loans or direct investments. For larger projects, a group of financial institutions can provide funding in the form of syndicated loans. In financial markets, the bonds and other financial instruments can be used to raise funds for financing infrastructure projects. The non-profit sector can also contribute to social infrastructure development.

**International-public Finance:** This source of infrastructure finance can come from other national bodies or from multi-national organizations. While the former would include financing provided by official development assistance and sovereign wealth funds, the latter would be investments made by multilateral development banks and specialized funds such as Climate Finance.

**International-private Finance:** The sources of funds under this category include private sector entities that invest in overseas projects. Other than investments made by large international banks, infrastructure can be financed by foreign direct investment carried out by large corporations and infrastructure and pension funds. At the retail level, remittance can form a large source of funds for infrastructure projects in some countries.

**Public-Private Partnerships (PPP):** The government can engage the private sector in infrastructure projects through PPPs. Under PPP, the ownership of a public asset is temporarily transferred to the private sector through a concession arrangement. The concession agreement determines the roles of the public and private sectors under PPP and identifies the ownership and the control rights of the projects of the parties during the concession period (Lienert 2009).

**Blended Finance:** In blended finance, any combination of the four categories identified above can be used to finance infrastructure projects. For example, multilateral organizations can partner with domestic private sector players to develop infrastructure projects.

While there are a variety of PPP models suited to the local political, economic and legal environments, some common elements are necessary for an efficient and effective PPP framework. Jomo et. al (2016) identify the necessary elements of an enabling PPP framework to be project selection and implementation (using credible cost-benefit analysis); contracts to prices and transfer risks (for optimum risk allocation); fiscal accounting and reporting standards (to provide transparency on fiscal implications); and legal, regulatory and
monitoring frameworks (to safeguard the welfare of citizens and promote sustainable development).

**Figure 2.3: Sources of Infrastructure Financing**

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Domestic</strong></td>
<td>• Government Revenue (tax/duties)</td>
<td>• Domestic Private investments</td>
</tr>
<tr>
<td></td>
<td>• Public borrowing</td>
<td>• Non-governmental organizations</td>
</tr>
<tr>
<td></td>
<td>• Natural resource concessions</td>
<td>• Philanthropy/social responsibility</td>
</tr>
<tr>
<td></td>
<td>• User fees</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Public-private partnership (PPP)</strong></td>
<td><strong>Blended Finance</strong></td>
</tr>
<tr>
<td><strong>International</strong></td>
<td>• Official development assistance (ODA)</td>
<td>• International bank loans</td>
</tr>
<tr>
<td></td>
<td>• Sovereign wealth funds</td>
<td>• Foreign direct investment (FDI)</td>
</tr>
<tr>
<td></td>
<td>• Multilateral development banks (MDBs)</td>
<td>• Multilateral infrastructure funds</td>
</tr>
<tr>
<td></td>
<td>• Specialized funds</td>
<td>• Foreign pension funds</td>
</tr>
<tr>
<td></td>
<td><strong>NDBs ($70-100bil)</strong></td>
<td>• Remittances</td>
</tr>
<tr>
<td></td>
<td><strong>Private Finance ($150-250bil)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Government Budgets ($500-550 bil)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ODA/MDB Finance ($40-60bil)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Other Developing Country Finance (&lt;$20bil)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Source:</strong></td>
<td>Adapted from Ahmed (2017)</td>
<td></td>
</tr>
</tbody>
</table>

**Chart 2.1: Estimates of Sources of Infrastructure Financing in Emerging Economies and Developing Countries (USD billion)**

The distribution of funds used in the infrastructure projects in emerging economies and developing countries is shown in Chart 2.1. The bulk of the infrastructure investments in these economies still comes from government budgets. The private sector is the second largest source of funds for the infrastructure sector with estimated investments of USD 150 to 250 billion. The national development banks in these countries also provide significant financing in the range of USD70-100 billion. The international sources of financing from overseas
development assistance (ODA) and multilateral development banks (MDBs) are in the range of USD 40-60 billion.

Chart 2.2 shows the relative size of different institutional investors globally. The largest three institutional players are banks which hold 33.5% of the total global assets of USD200 trillion followed by investment companies (24.2%) and insurance and pension funds (22.1%). The extent to which different institutional investors can contribute to the infrastructure sector depends on their balance sheet structures and risk appetite. The features of investment horizon, risk appetite and considerations that different financial institutions have been shown in Table 2.4 below.

**Chart 2.2: Assets under Management of Institutional Investors (USD trillion)**

![Bar chart showing the assets under management of different institutional investors](chart.png)

*Source: McKinsey (2016: p. 16).*

Even though the banking sector has the largest assets under management, Table 2.4 shows it is difficult for them to invest in large infrastructure projects due to the features of their balance sheet. Given the nature of deposits that are liquid, it becomes difficult for banks to commit large amounts of funds in infrastructure projects that are, by their nature, long-term and illiquid. Larger banks would invest in infrastructure as an asset class but do so using syndications. Since other institutional investors such as life insurance, pension funds, sovereign wealth funds, endowments and foundations have relatively longer-term investment horizons, they are well suited to invest in infrastructure projects.

In terms of the instruments used for financing long-term infrastructure, there is a difference between providing direct financing versus raising funds from capital markets. Direct financing either in the form of equity or debt makes investments illiquid, which can increase the risks and costs. However, if capital markets are used to raise the funds by issuing tradable securities, it would encourage financial institutions to invest in infrastructure projects. For example, if tradeable project bonds are issued to raise funds, banks and other institutional investors would also invest in infrastructure projects since, in case they need liquidity, they will be able to sell the securities on the secondary market.
Table 2.4: Risk Appetite and Considerations of Different Financial Institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>Investment Horizon</th>
<th>Risk Appetite</th>
<th>Investment Objectives</th>
<th>Risks and Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Banks</td>
<td>Short term</td>
<td>Low to medium</td>
<td>Make net interest margins</td>
<td>Asset-liability management (ALM) mismatch risk Intensifying regulatory environment (BASEL III)</td>
</tr>
<tr>
<td>Nonlife insurance</td>
<td>Short term</td>
<td>Medium</td>
<td>Meet liability funding costs calculated by actuaries</td>
<td>ALM mismatch risk Intensifying regulatory environment (IFRS II, Solvency II)</td>
</tr>
<tr>
<td>Investment Company</td>
<td>Short to medium term</td>
<td>Depends on funds mandates</td>
<td>Maximize company returns</td>
<td>Liquidity issue due to beneficiary redemption</td>
</tr>
<tr>
<td>Life insurance and private pension</td>
<td>Long term</td>
<td>Medium</td>
<td>Meet liability funding costs calculated by actuaries</td>
<td>ALM mismatch risk Intensifying regulatory environment (IFRS II, Solvency II)</td>
</tr>
<tr>
<td>Public pension</td>
<td>Long term</td>
<td>Medium</td>
<td>Meet liability funding costs calculated by actuaries</td>
<td>ALM mismatch risk Rising longevity risk</td>
</tr>
<tr>
<td>Sovereign wealth funds</td>
<td>Long term</td>
<td>Medium to high</td>
<td>Maximize sovereign's wealth</td>
<td>Government mandate approval issue</td>
</tr>
<tr>
<td>Endowments and foundations</td>
<td>Long term</td>
<td>High</td>
<td>Maximize beneficiary’s wealth</td>
<td>Can have mandates that restrict investment in developing economies</td>
</tr>
</tbody>
</table>


Chart 2.3: Global Infrastructure Investment-Equity and PPP by Type of Owner (%)
Chart 2.4: Global Sector-wise Infrastructure Investments (%)

Source: PWC & GIIA (2017)

Chart 2.3 shows the involvement of different institutional investors’ stakes in the infrastructure projects under PPP arrangements globally. While in all countries the corporations are the major investors in the infrastructure sector, in developed economies such as Australia, Europe and North America the infrastructure funds and investment firms also contribute significantly to the sector. Chart 2.4 shows the global investments in different sectors of infrastructure. Investments in the transport and energy sectors dominate in developing economies such as Africa, Asia and Latin America. In developed economies such as Australia and Europe, the social sector has also received significant investment.

2.4. Factors Affecting Financing Long-term Infrastructure Projects

Infrastructure can be considered as a separate investment class with risks and returns lower than equity and higher than debt. Infrastructure assets, however, have some unique features that affect the decisions for investment. Infrastructure projects are large, involve many stakeholders and investment arrangements, and entail complex legal documentations and intricate financial planning. The legal contracts have to ensure the proper allocation of risks and returns to create the right incentives for attracting capital. The long timespan of infrastructure projects also makes them less liquid. Investments in sustainable infrastructure investments also appeal to ethical, green and impact investors. Some infrastructure projects such as highway or water supply can be natural monopolies and governments would control them directly or indirectly to ensure that monopoly power is not abused. The key factors that affect private-sector financing of infrastructure projects are presented next.5

2.4.1. Infrastructure Policy Framework

The enormity of investments and the long-term nature of infrastructure financing require appropriate policies and capabilities for implementation. Being large and long-term

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investments, infrastructure projects are prone to government interference and corruption that can increase political risks. The absence of policies makes it difficult to create an enabling environment, build pipelines of sustainable and viable infrastructure projects, and increase the transactions and development costs that create disincentives for private sector investments. A key hurdle that can constrain the participation of the private sector is the limited information on infrastructure projects that lead investors to think that projects entail high risks. There is thus a need to provide high quality information on infrastructure projects and identify the features and risks involved in preferably standardized formats (Jobst 2018).

There is a lack of a list of bankable pipelines of infrastructure projects in many countries which makes it difficult to estimate demand and needs. While institutional investors are willing to invest in infrastructure projects, there may be a lack of well-structured long-term projects (FSB 2014). The problem is not limited to developing countries as only half of the G-20 countries publish infrastructure pipelines (McKinsey 2016: 3). Since infrastructure has to adjust to the changing needs of an economy, there is a need to have a forward looking infrastructure plan outlining investment needs and outlays.

A key issue of infrastructure development in the SDGs era is integrating sustainability in all projects. Sustainable infrastructure must consider triple-bottom line economic/financial, environment and social objectives when considering any future projects (World Bank 2008:21). In this regard, the International Federation of Consulting Engineers provides a list of standards and guidelines that can be used for implementing sustainable infrastructure.  

### 2.4.2. Legal and Regulatory Framework

Being long-term investments, there is a need for legal and regulatory certainty to reduce risks. In many countries, a coherent and predictable legal framework for infrastructure investments is lacking. Furthermore, with the implementation of Basel III standards in the post crisis period, the regulatory regimes will potentially create disincentives to investments in long-term projects as these will require higher capital charges.

The legal/regulatory framework for PPP in specific countries depends on a variety of factors including the legal system in place. PPP can be organized under either stand-alone PPP laws or regulations or be structured under general procurement laws or regulations. While civil law regimes have codified laws and regulations, common law countries depend more on judicial rulings, legal precedents and the contracts themselves (World Bank 2018f). As such, it is less likely for the latter jurisdictions to have stand-alone laws related to PPP. World Bank and PPIAF (2017) identify the following legal framework to support infrastructure financing by the private sector.

#### PPP or Concession Laws: 
Laws that outline the rules and procedures governing PPP or concession contracts by outlining relevant issues such as the duration, extension and termination of the contract, acquisition of rights of the PPP project, security interests, operation of the project, takeover by the contracting authority, dispute settlement and the governing law.

#### Sectorial Laws and Regulations: 
Each sector would have specific laws that define the role and responsibilities of different stakeholders and govern the activities carried out by them. For example, for water resources, a specific law/regulation would create a regulatory body under

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6 http://fidic.org/node/5965
the relevant ministry to oversee and regulate issues related to water resources and set guidelines on the quality standards, fees structures, etc.

Decentralization Legislation: The decentralization laws would be required to encourage broader private sector participation including SMEs. The law would delegate the budgetary issues and infrastructure management functions to local authorities to make dealing with private sector participation more accessible and manageable.

Contractual Framework: Within the legal framework, contracts are drafted that outline the roles, responsibilities, rights and obligations of different parties and safeguard their interests and public interest. Other than general provisions such as contract duration, procedures for dealing with changed situations and force majeure, procedures of dispute settlement, etc., the contractual framework should cover various relevant issues related to the project that include the following: obligations of the parties under the contract, rights of the operator and customers, requirements of the quantity and quality of services provided, approved tariff rates and formulas, insurance requirements, obligation to cooperate with the relevant government bodies, compliance with applicable laws, respecting the environment, etc. A key aspect of the contract is clearly identifying the allocation of different risks among different stakeholders over the lifetime of the project. Given the long-term nature of infrastructure projects, contractual designs should flexible enough to allow for renegotiations to reduce risks arising from demand and other sources (Henckel and McKibbin 2010).

Regulatory Framework: The current risk-based capital adequacy and solvency regimes and liquidity requirements can discourage financial institutions to invest in infrastructure projects as these require holding higher amounts of capital for investments made in long-term debt instruments (FSB 2014, Jobst 2018). For example, the Basel III liquidity framework would induce banks to hold short-term liquid assets to match their liability structures. Furthermore, the collateral in project-financing that may not be considered good quality may discourage investments in these long-term assets as these would imply higher capital requirements. This is particularly true for projects that, by their nature, do not have a credit history, thus making assessments of risk difficult. One way to deal with this problem is for regulatory authorities to identify infrastructure as a distinct asset class and clearly identify the conditions under which the capital requirements can be reduced with mitigated risks.

2.4.3. Institutional Arrangements and Procurement Processes and Procedures

Given the complexity of PPP arrangements, there is a need to have a sound institutional arrangement to implement them. The legislation must provide for an open, transparent and competitive framework for procurement processes and procedures that allow for multiple parties to bid for infrastructure projects. The procurement procedures should clearly outline the criteria used for soliciting proposals and evaluate their qualifications and merits. While institutional arrangements can be a part of the regulatory arrangement in some countries, it is common to establish a PPP unit that deals with the implementation of the projects (World Bank 2018f: 30). World Bank (2018f) identifies three main stages of the PPP project cycle that the legal/regulatory system and institutions often set up.

The first is the preparation stage whereby the potential infrastructure projects that can be procured for development as PPPs are identified. Given the large demand for infrastructure and limited resources, selection of PPPs would depend on the priorities identified in an
integrated infrastructure plan and cost-benefit analysis. Other than analysing the fiscal and budgetary implications in terms of assessment of PPP relative to public procurement, projects would also be analysed to assess the socioeconomic and environmental impacts, financial viability, risk management, and market assessment. After assessing the projects, the relevant authority (e.g. Ministry of Finance or central budgetary) approves the suitable projects in the preparation stage.

Once the projects are identified, in the second stage procurement is implemented. The prerequisites of the procurement stage include a PPP evaluation committee that meets certain specific criteria and clear procurement procedures. The bids are solicited with the publication of a PPP procurement notice whereby the tender documents are sought. The tender documents would include the PPP procurement process and criteria used for prequalification and short-listing. The proposals would include the financial models that are evaluated according to the evaluation criteria identified in the tender notice. Subsequently, the award notice is published and notified to all the bidders.

The final stage of PPP procurement is the management of the contract for the selected projects that would require a PPP contract monitoring and evaluation management system. The system would track progress, completion, and contract implementation after the completion of the PPP project. Issues that will be considered in contract management would include any changes in the structure of the SPV, any modifications or renegotiations, and dealing with issues such as changes in laws, refinancing, subcontracting, dispute resolution, and contract termination.

Chart 2.5 shows the averages of procurement regimes of OIC member countries and countries belonging to different income groupings. The procurement stage has the highest score for all country groupings, followed by contract management, except for high income countries where the preparation stage secures the second highest score. While the procurement status of OIC countries is better than that of low income countries, the stages have lower scores compared to all other income groups, including lower-middle income countries. The results indicate that the overall procurement regime in OIC countries is not well developed.

**Chart 2.5: Procurement Regimes for PPPs of Different Country Groupings**

![Chart 2.5: Procurement Regimes for PPPs of Different Country Groupings](image)

Source: World Bank (2018f)
World Bank (2018f) also identifies good practices related to Unsolicited Proposals (USPs) of PPPs whereby a private sector entity proposes an infrastructure project without any request from the government. Instead of the government initiating the projects, private sector players provide the basic features of the proposed project and approach the government for approval. The USPs are alternative, government initiated projects and have been increasingly in use during recent years. Good practices for USPs include assessing the proposal’s alignment with the government’s overall strategy and their investment priorities and, once selected, using the competitive procurement procedure discussed above.

2.4.4. Project Related Factors

Economic factors: A key factor for private investments in infrastructure is bankability, which implies that the projects have adequate cash flows to repay the investors. Since infrastructure projects are complex, investors are careful to assess the risks of variation of cash flow and ensure that they remain within the expected margins. However, due to the limited number of projects and the uniqueness of each one, there is a lack of historical data and information on risk-adjusted returns, making decision-making difficult. Whereas investors would expect higher risk-adjusted returns, in many infrastructure projects the returns may be low. For example, tariff levels are usually low in water and energy sectors. Furthermore, enough revenue cannot be generated in many developing countries due to leakage and the stealing of water and electricity that limits the ability to maintain and expand the service. For instance, McKinsey (2016: 3) reports that up to 70% of the water provided in sub-Saharan Africa is unmetered, leaked or stolen.

Many sustainable infrastructure projects are capital intensive and that can drive up the up-front costs. For example, transport investments require high upfront capital costs, have long time lines, and produce relatively low financial returns (IDFC 2014: 5). Furthermore, administrative costs can be high in the energy sector due to difficulties and delays in procedures and approving concessions (IDFC 2014: 5).

Human capital: Infrastructure projects are large and complex, involving many parties and people with different skills and expertise. Structuring financial contracts for infrastructure projects is complicated and requires not only financial expertise but also an understanding of the project’s features along with the knowledge on risks and return. A key constraint is the lack of professionals with the knowledge and experience of structuring and financing large infrastructure projects.

2.5. Infrastructure Needs and Financing Gaps in the OIC Member Countries

As indicated in Chapter 1, the global need for infrastructure financing needed to achieve sustainable investment goals is huge and most countries will face funding gaps. Most of the OIC member countries belong to the low income group and have weaker infrastructure. Chart 2.6 shows the status of overall infrastructure, the transport infrastructure, and the electricity and telecom infrastructure for OIC MCs and different regions. Although the overall infrastructure index of OIC MCs (3.6) is better than that of the Sub-Saharan Africa (2.9) and South Asia (3.4) regions, it scores less than all other regions of the world. The transport infrastructure and electricity and telecom infrastructure also reveal similar results.

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Chart 2.6: Infrastructure Status of Regions and OIC M Cs (0-7 Best)

<table>
<thead>
<tr>
<th>Region</th>
<th>Index Value (0-7 best)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>4.7</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>4.4</td>
</tr>
<tr>
<td>Latin America &amp; Europe &amp; North America</td>
<td>4.8</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>5.6</td>
</tr>
<tr>
<td>South Asia</td>
<td>3.4</td>
</tr>
<tr>
<td>OIC Members</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: WEF (2018), The Global Competitive Index Historical Dataset 2007-2017

Chart 2.7: Transport Infrastructure Status of Regions and OIC Member Countries (0-7 Best)

<table>
<thead>
<tr>
<th>Region</th>
<th>Quality of roads</th>
<th>Quality of railroad infrastructure</th>
<th>Quality of port infrastructure</th>
<th>Quality of air transport infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Asia</td>
<td>3.7</td>
<td>3.5</td>
<td>3.4</td>
<td>3.8</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>3.4</td>
<td>3.5</td>
<td>3.3</td>
<td>3.6</td>
</tr>
<tr>
<td>Europe and North America</td>
<td>4.7</td>
<td>4.1</td>
<td>4.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>3.6</td>
<td>2.2</td>
<td>4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>4.4</td>
<td>3.3</td>
<td>4.4</td>
<td>4.6</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>4.6</td>
<td>2.9</td>
<td>4.4</td>
<td>4.9</td>
</tr>
<tr>
<td>OIC Average</td>
<td>3.8</td>
<td>2.9</td>
<td>3.8</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: WEF (2018), The Global Competitive Index Historical Dataset 2007-2017

Chart 2.7 shows the status of the quality of the transport infrastructure of OIC member countries relative to other regional groupings. While the overall transport infrastructure of OIC countries is better than Sub-Saharan Africa and Latin America and the Caribbean regions, its quality is similar to that of South Asia and is lower than the other regions of the world. Within OIC member countries, the quality of air transport appears to be the best (score of 4.1) and the railroad infrastructure is the worst (score of 2.9). Chart 2.8 shows that the quality of electricity supply in OIC member countries (score of 4.1) is better than South Asia (score of 4) and Sub-Saharan Africa (score of 3.1) but worse compared to all other regions of the world.
Chart 2.8: Quality of Electricity Supply of Regions and OIC Member Countries (0-7 best)

<table>
<thead>
<tr>
<th>Region</th>
<th>Quality Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Asia</td>
<td>4.0</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>3.1</td>
</tr>
<tr>
<td>Europe and North America</td>
<td>5.9</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>4.4</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>5.1</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>5.4</td>
</tr>
<tr>
<td>OIC Average</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: WEF (2018), The Global Competitive Index Historical Dataset 2007-2017

Chart 2.9 shows the status of the telecommunications sector in OIC member countries relative to other regions. Although mobile phone subscriptions and fixed telephone lines in OIC countries (114.8 and 8.7 respectively) are better than those in South Asia (92.5 and 3.5 respectively) and Sub-Saharan Africa (92 and 3.5 respectively), they are lower than all other regions of the world.

Chart 2.9: Status of Telecommunications of Regions and OIC Member Countries (No. of mobile phones/100 pop.)

Source: WEF (2018), The Global Competitive Index Historical Dataset 2007-2017
Chart 2.10: Total Infrastructure Investments Private Sector Contribution to Infrastructure Investments (% in Selected OIC Member Countries 2011-2015)

<table>
<thead>
<tr>
<th>Country</th>
<th>Total value of private finance infrastructure (% of GDP)</th>
<th>Total infrastructure investment (% GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAE</td>
<td>2.79%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Turkey</td>
<td>6.71%</td>
<td>14.04%</td>
</tr>
<tr>
<td>Tunisia</td>
<td>3.21%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Senegal</td>
<td>14.04%</td>
<td>19.3%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1.91%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Qatar</td>
<td>1.09%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1.33%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>3.13%</td>
<td>8.26%</td>
</tr>
<tr>
<td>Morocco</td>
<td>1.04%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.46%</td>
<td>14.8%</td>
</tr>
<tr>
<td>Guinea</td>
<td>0.30%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Egypt</td>
<td>1.04%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Cote d’Ivore</td>
<td>3.01%</td>
<td>46.0%</td>
</tr>
<tr>
<td>Benin</td>
<td>0.37%</td>
<td>37.1%</td>
</tr>
</tbody>
</table>

Source: https://infracompass.github.org/compare_countries

Chart 2.10 shows the infrastructure investments and the private sector’s contribution to investment in the sector for selected OIC member countries.\(^8\) While Morocco and Senegal have made significant investments in infrastructure during 2011-2015, with 46% and 37.1% of the GDP respectively, investments in that sector in many other countries have been modest. The chart also shows that the contribution of the private sector to infrastructure investments varies across different countries. While the private sector has played an important role in some countries such as Senegal (14.04% of GDP), Morocco (8.26% of GDP) and Turkey (6.71% of GDP), in other countries its contribution has been small. In some countries such as Benin, Egypt and Guinea, the private sector investment in infrastructure has been less than 1% over the period 2011-2015.

Chart 2.11 shows the investment in different infrastructure sectors in OIC member countries during the periods 2005-2010 and 2010-2015. While most investments during 2005-2010 were in the telecommunications sector (65.7%), during the subsequent five years the investments went into the energy (40.5%) and transport (30.8%) sectors.

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\(^8\) The OIC countries included in the chart are among the 56 countries included in the GIHub database.
Looking forward, the regional spending and investment needs during 2016-2040 are shown in Chart 2.12. While the two largest economies dominate in infrastructure investments, all regions of the world are expected to have deficits in infrastructure investments leading to 2040. The 13 OIC member countries representing the largest economies are expected to spend USD 5.6 trillion in infrastructure during the period against the investment needs of USD 7.2 trillion. This will leave a deficit of USD 1.6 trillion in infrastructure investments during this period for the group.

Chart 2.12: Cumulative Regional Infrastructure Spending Requirements 2016-2040 (USD trillion, 2015 prices and exchange rates)

Source: GIH and Oxford Economics (2018), Global Infrastructure Outlook, Infrastructure investment needs 50 countries, 7 sectors to 2040.
The country specific information on the projected infrastructure spending and the infrastructure needs are shown in Chart 2.13. The chart shows that Indonesia, being the largest economy in the group, is expected to spend the most in infrastructure projects, followed by Saudi Arabia and Nigeria. In all countries, however, the infrastructure spending at current trends will result in a shortage in investments relative to what is needed.

Chart 2.13: Infrastructure Spending Needs 2016-2040 Cumulative in Selected OIC Countries (USD billion, 2015 prices and exchange rates)

Source: GIH and Oxford Economics (2018), Global Infrastructure Outlook, Infrastructure investment needs 50 countries, 7 sectors to 2040.

Chart 2.14: Infrastructure Gap in Selected OIC Countries 2016-2040 (USD billion 2015 prices and exchange rates and as a percentage of 2015 GDP)

Source: GIH and Oxford Economics (2018), Global Infrastructure Outlook, Infrastructure investment needs 50 countries, 7 sectors to 2040.
To put into perspective the relative size of the projected deficits in infrastructure investments, Chart 2.1.4 also shows the infrastructure gaps as a percentage of GDP in 2015. A higher percentage of the gap relative to the GDP represents the relative larger size of the infrastructure investments that would be required and therefore greater difficulty in satisfying the financing needs. For example, though the infrastructure investment gap in Senegal during 2016-2040 will be USD 19 billion, this represents close to 136% of the country’s GDP in 2015. On the other hand, the deficit in infrastructure investments in Indonesia during the period is USD 70 billion, which is only 8.1% of the GDP of 2015 and is more manageable.

The information in Chart 2.1.4 shows that there will be a huge need for, and gaps in, financing infrastructure projects globally. Given the commitments made to achieve the SDGs, the need to fill these investment gaps becomes more acute. Since it is difficult for governments to provide the massive demands of funding needed to develop the infrastructure sectors, there is a need for the private sector to also contribute to this effort. In this regard, the financial sector plays a very important role to mobilize the resources. The next chapter discusses the role of Islamic finance in providing the products and structures through which investments can be realized.
3 Islamic Finance for Long-Term Infrastructure Financing

3.1. Introduction

Islamic law covers various aspects of life including economic dealings in a comprehensive way. Other than providing legal rules, Shariah also provides moral principles relating to economic activities and transactions. The overall objectives of Shariah are to enhance welfare (maslaha) and prevent harm (mafsada). It defines the founding concepts of an economic system such as property rights, contracts, the objectives of economic activities and principles that govern economic behaviour and the activities of individuals, markets, and the economy. A hallmark of Islamic teachings is establishing justice which, in an economy, would entail eradicating “all forms of inequity, injustice, exploitation, oppression and wrong doing” (Chapra 1992: 209). While property rights in Islam are deemed sacred and gainful exchange and trade by mutual consent are encouraged, Shariah provides rules that govern its use and exchange. A key element related to the distribution of wealth is the obligation to pay alms (zakat) when ownership of wealth is greater than a threshold level.

Islamic economists argue that an economic and financial system based on the Islamic ethos can bring about equity, stability and growth in the economy. The economic activities that can produce these results are governed by certain principles and rules. Other than avoiding exploitative practices and prohibited activities such as alcohol, pork products, gambling, etc., the key features of the Islamic financial system include risk-sharing and materiality in terms of links with the real economy (El Hawary et al. 2004: 5). The emphasis on the promotion of economic activities in a just and equitable manner implies that Islamic finance has the great potential to contribute to economic development. As many infrastructure projects benefit the community at large, financing these projects by the Islamic financial sector would be in compliance with its ideological standing (Miller and Morris 2008). The social and ethical values and risk-sharing and asset-backed financing features are reflected at the transaction level in the use of specific nominate contracts.

In this chapter, the ways in which Islamic finance can be used to finance infrastructure projects are presented. As discussed in Chapter 2, infrastructure projects are large and complex, involving different functions and contract types. The functions include design, build, rehabilitate, finance, maintain and operate (see Table 2.1). Various forms of public-private partnerships can be organized depending on what function is taken by the private sector. However, the key focus in this chapter is the function of finance and the role that the Islamic financial industry can play in providing financing to infrastructure projects. The principles of Islamic finance naturally fit well with the features of infrastructure projects as identified by World Bank et. al. (2017) and shown in Table 3.1.

This chapter first presents the basic features of Islamic financial contracts and the ways in which these can be used in infrastructure projects, and then it presents the roles that different sectors of the industry play in contributing to the development of infrastructure projects. For each financial sector, the potential and the forms in which investments can be made are presented followed by one or two case studies and the identification of the prospects and challenges that the sector faces in financing infrastructure projects.
Table 3.1: Principles of Islamic Finance and Features of Infrastructure Projects

<table>
<thead>
<tr>
<th>Principles of Islamic Finance</th>
<th>Infrastructure PPP Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returns should be linked to profits/earnings and be derived from commercial risk taken by the financier.</td>
<td>Infrastructure PPP projects allow risk to be shared among the parties involved in the project, including financiers.</td>
</tr>
<tr>
<td>Islamic financiers are partners in a project.</td>
<td>PPP projects allow Islamic financiers to become a party to the project and not just a mere lender.</td>
</tr>
<tr>
<td>Transaction should be free from speculation or gambling (maysir)</td>
<td>Infrastructure PPP projects are by nature free from speculation or gambling.</td>
</tr>
<tr>
<td>Existence of excessive uncertainty in a contract is prohibited</td>
<td>Project contracts are generally well defined with no uncertainty (such as lump-sum, EPC contracts)</td>
</tr>
<tr>
<td>Investments related to prohibited goods and activities such as alcohol, gambling, and weapons are prohibited.</td>
<td>Infrastructure projects exclude these projects.</td>
</tr>
</tbody>
</table>


3.2. Islamic Financial Contracts

The basic framework of Islamic commercial law is permissibility (ibahah), which suggests that all transactions are permitted except what is prohibited by Shariah. Two broad categories of prohibitions recognized by Islamic law are riba (literally meaning 'excess') and gharar (legal ambiguity or excessive risk). While riba is usually translated into interest, it has wider connotations such as the prohibition on the sale of debt. Gharar can include many aspects related to deception, excessive uncertainty and contractual ambiguity in transactions. One of the implications of gharar during contemporary times is the prohibition of derivative products such as forwards, swaps and options.

Since interest is prohibited, Islamic finance uses various other permissible contracts to structure financial products. The contracts used in practice can be broadly classified as sale, leasing, partnership and agency. The basic features of the key contracts used in Islamic finance are presented below.

Murabahah is a cost-plus sale where the seller adds a profit component (mark-up) to the cost of the item being sold. Bai-muajjal is a contract where the purchase is made on credit and the payment for a good/asset is delayed. A variant would be a sale where the payments are made in instalments. These contracts create debt and can have both short and long-term tenors.

Salam sale is a pre-paid or product-deferred sale of a generic good. In a salam contract, the buyer of a product pays in advance for a good that is delivered at a later agreed upon date. The contract is applied mainly in financing agricultural goods.

Istisna contract is similar to the salam contract with the difference being that, in the former, the good/asset is produced according to the specifications given by the buyer. This contract mainly applies to manufactured goods and real estate. Furthermore, in istisna, the payments can be made in instalments over time with the progression of the production.

Ijarah is a lease contract in which the lessee pays rent for use of a usufruct. In ijarah the ownership and right to use an asset (usufruct) are separate. It falls under a sale-based contract as it involves the sale of usufructs. A lease contract that results in the transfer of an asset to the

---

9 For a discussion on gharar see ElGamal (2001) and Al-Dhareer (1997).
10 For a discussion on Islamic modes of financing see Ayub (2007) and Usmani (1999).
lessee at the end of the contract is called *ijarah wa iqtina* or *ijarah muntahia bittamleek*. *Ijarah wa iqtina* combines sale and leasing contracts and uses hire-purchase principles. After the completion of payments during the contract period, the lessee assumes the ownership of the asset.

*Musharakah* is a partnership between parties in which financial capital and labour/management act as shared inputs in a project and profit is distributed among partners at an agreed upon ratio. The loss, however, is distributed according to the share of the capital.

*Mudarabah* is a silent partnership in which financial capital is provided by one or more partner(s) (*rab ul mal*) and the work is carried out by the other partner(s) (*mudarib*). While the financiers and the managers of the project share the profit at an agreed upon ratio, the loss is borne by the former according to their share in the capital. Being a sleeping partner, the financiers (*rab ul mal*) do not have any say in the management of the firm.

*Wakala* is an agency contract by which a person/entity represents another person/entity to perform certain duties. The compensation structures for performing the specified duties can be varied.

*Tawarruq* is used when a client needs cash. The financial institution buys a certain commodity and then sells it to the client at a mark-up with the price payable in the future. The client assigns the financial institution as an agent to sell the commodity back to a broker on spot and transfer the proceeds of the sale to the client.\(^{11}\)

### 3.3. Islamic Infrastructure Financing: Framework and Contracts

There are two key relationships that are important with regards to using Islamic finance for financing infrastructure projects as shown in Chart 3.1. The first relates to Islamic perspectives on the PPP arrangement. Once a structure for the PPP arrangement is determined, the second issue of raising funds in a Shariah compliant manner to finance the project needs to be resolved. These are discussed below.

#### 3.3.1. Islamic Perspectives on Infrastructure Contracting

As indicated in Chapter 2, World Bank (2017c) identifies three broad parameters that can describe PPPs. The first relates to the types of assets involved in terms of whether they are new (greenfield) or existing (brownfield). Second are the functions that the private party is responsible for in the PPP arrangement, which are identified as design, build or rehabilitate, finance, maintain and operate. Accordingly, PPPs can take various structures that include management and operating contracts, leasing, concessions, build-operate-transfer (BOT), design-build-operate (DBO), joint ventures, and partial divestiture of public assets (Delmon 2010: 14; World Bank 2018i). The final feature of the PPP contract relates to how the private party is paid, and this payment comes from the revenue of the project assets in the form of fees/tariffs from either the government or service users or both. Depending on the type of PPP contract used, the private entity project company will enter into a contract with the government to implement the project. In cases where an asset is involved, a concession agreement will determine the terms of the relationship between the government and the private sector project company.

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\(^{11}\) Although tawarruq is used by the industry, the OIC Fiqh Academy prohibited organized tawarruq in a resolution in 2009.
AAOIFI (2015: 588) Standard Number 22 defines concession contracts as the "act of an authorized party granting another party the right of utilizing, constructing or managing a project for agreed upon consideration". From an Islamic perspective, the standard permits the use of concessions as long as the contracts do not contradict the rules and principles of Shariah such as *riba* and *gharar*. This principle applies to the utilization, construction and management concessions identified in the standard which incidentally cover the functions of design, build or rehabilitate, maintain and operate that are included in PPP arrangements identified by World Bank (2017c).

To avoid *riba* and *gharar*, the financing function of the PPP must be Shariah compliant. Since the infrastructure projects involve real assets, the use of Islamic finance for their development is compatible with the principles of linking financing to the real sector. However, the structure of Islamic financing depends on the nature of PPP contracts that are used. For example, while a combination of *istisna* and *ijarah* can be used when the project is greenfield, in case of brownfield projects a sale and leaseback (*ijarah*) structure can be used (Clifford Chance 2013; GIFR 2016).

### 3.3.2. Structures of Islamic Infrastructure Financing

As discussed in Chapter 2, the sponsors of the infrastructure project provide the equity to establish the Project Company and then raise further funds in the form of debt or hybrid structures to finance the completion of the project. There are two broad ways in which the funds for infrastructure finance can be raised. First, financial institutions can invest in the projects directly in form of equity or debt. Second, the Project Company can tap into the capital markets to raise funds from the investors by issuing a security. Thus, investors in infrastructure projects will have the option of either directly investing in a project or buying project securities. To understand the mechanisms and structures of infrastructure financing, the financiers are likely to create an SPV which is referred to as the Funding Company. When using Islamic finance, one or more Islamic modes of financing identified will be used to structure a product to raise funds. However, several other supporting contracts are usually used to support the dominant contract. For example, a leasing contract would entail undertaking to purchase/sell the asset, managing a contract whereby the Funding Company assigns the Project Company to carry out the maintenance, and a collateral agreement that identifies the security backing the financing.

As indicated in Chapter 2, three broad categories of contracts used for infrastructure financing are equity, debt and hybrid. Table 3.2 shows the key features of conventional and Islamic finance contracts used for infrastructure financing. Equity takes the form of ownership shares in the project company (SPV) which would be the same in Islamic finance. However, the conditions governing the ownership and control rights would be driven by the features of *mudarabah* or *musharakah* contracts. For example, while in the former the shareholders will not have control rights, in the latter all shareholders will have a say in managing the project company. The other source of equity in infrastructure comes in the form of funds that raise money from investors which is then invested in infrastructure projects. In an Islamic framework, this will take a similar structure to fund managers acting as an agent *(wakil)* managing funds for investors for a fee.

While debt-based financing in conventional finance primarily takes the form of interest-based loans or bonds, in Islamic finance these are not permissible. Instead, the sale-based contracts
such as murabahah and istisna that create debt are used in infrastructure projects. Note that these structures can be used to raise funds from both financial institutions and capital markets by issuing sukuk.

Table 3.2: Conventional and Islamic Finance Contracts for Infrastructure Financing

<table>
<thead>
<tr>
<th>Contract Categories</th>
<th>Conventional Finance</th>
<th>Islamic Finance</th>
</tr>
</thead>
</table>
| Equity              | • Equity provided by sponsors (ownership shares in the SPV)  
|                     | • Infrastructure Equity funds | • Equity provided by sponsors (ownership shares in the SPV) —can take the form of musharakah or mudarabah  
|                     |                       | • Infrastructure equity funds—the fund manager works as an agent (wakil) to manage the funds |
| Debt                | • Loans with interest  
|                     | • Interest-based bonds | • Sale-based instruments (murabahah and istisna) |
| Hybrid              | • Various structures such as convertible bonds, preferred shares, mezzanine financing, etc.  
|                     |                       | • While certain features such as convertibility of debt to equity are allowed, other structures such as preferred shares are not permissible.  
|                     |                       | • Structures combining various contracts such as istisna-ijarah, wakala-ijarah, etc. |

Source: Author's own.

The third category of instruments used for infrastructure financing is hybrid contracts. The conventional financial sector uses various types of hybrid contracts such as convertible bonds, preferred shares, mezzanine financing, etc. The acceptability of hybrid instruments from a Shariah point of view will depend on their specific features. For example, while Islamic principles would not object to a convertibility feature in a debt-based sukuk, preference shares that pay a fixed dividend are not allowed. Most of the hybrid contracts in Islamic infrastructure financing take the form of combining two or more Shariah-compliant contracts such as istisna-ijarah, wakala-ijarah, etc. Some of the specific Shariah-compliant structures that are used in financing infrastructure projects are discussed below.

**Istisna**

Since most infrastructure contracts involve the construction of physical facilities, istisna is an appropriate contract that can be used for project financing. After the project specifications and price are known, the Funding Company takes the responsibility to construct and sell the project assets to the Project Company under the istisna contract. The former then signs a parallel istisna contract with an EPC company to construct the assets according to the project specifications. The difference in the prices paid to the EPC company and the sale price received from the Project company is the profit generated from financing. The Project Company can pay the price of the asset to the Funding Company in instalments over the tenure of the contract. The basic structure of financing using the istisna mode is shown in Chart 3.1.

Since istisna contracts create debt, the financing yields fixed rates of returns. This can expose the Funding Company to rate-of-return risks for longer-term projects since the profit cannot be adjusted if the market benchmark rates changes. Another problem of using the istisna is that the debt receivables are not tradeable which makes the financing structure illiquid. These issues can be resolved by structuring an istisna-ijarah structure which is discussed next.
**Chart 3.1: Istitna Contract for Infrastructure Finance**

```
1 - Payment for construction of project
2 - Delivery of project assets
3 - Delivery of project assets
4 - Payment for project assets in installments
```

Source: Adapted from Ahmed (2009a) and Khaleq et al. (2012).

**Istitna-Ijarah**

In the first phase of this structure, the Funding Company buys the project assets from the Project Company using an *istisna* contract and pays for the costs of construction for different phases of the project. The Project Company builds the assets using an EPC company and delivers it to the Funding Company after its completion. In the second stage of the contractual framework, the Funding Company leases the project asset to the Project Company which pays rent for the duration of the contract. At maturity, the ownership of the project asset is transferred to the Project Company. The features of the *istisna-ijarah* structure used for infrastructure financing is shown in Chart 3.2.

**Chart 3.2: Using Istitna-Ijarah for Infrastructure Finance**

```
1 - Payment for construction of project
2 - Delivery of project assets
3 - Lease of project assets
4 - Rental Payments
```

Source: Adapted from Ahmed (2009a) and Khaleq et al. (2012).

The advantage of the *istisna-ijarah* financing structure is that it provides flexible returns and liquidity. The rent can be linked to the market benchmark rate so that when the rate changes...
the rent adjusts accordingly. Since the Funding Company owns the project assets, it can sell its stakes in the market if needed. While the *istikna-ijarah* structure resolves the benchmark and liquidity risks, it introduces the risks related to the ownership of assets for the Funding Company, which can be insured. Another issue relates to whether the Funding Company can earn a return during the construction period, which can be long in the case of infrastructure projects. In such cases, a forward lease (*ijara mausufa fil dhimmah*) can be used whereby the Project Company pays advance rentals to the Funding Company during the construction period.

**Chart 3.3: Wakala-Ijarah Structure for Infrastructure Finance**

1-Transfer of funds for construction of project  
2-Delivery of project assets  
3-Lease of project assets  
4-Rental Payments

*Source: Adapted from Ahmed (2009a) and Khaleq et al (2012).*

**Wakala-Ijarah**

The *wakala-ijarah* structure is similar to the *istikna-ijarah* structure with the difference that instead of a sale contract between the Funding Company and the Project Company, the former appoints the latter as an agent to construct the project assets. After the assets are constructed and delivered to the Funding Company, it is leased back to the Project Company. While rents are paid during the contract period, the project asset is transferred to the Project Company at the completion of the contract period. The *wakala-ijarah* structure to finance infrastructure projects is shown in Chart 3.3.

**Musharakah**

Under a *musharakah* structure, the Funding Company and Project Company form a joint-venture *Musharakah Company* which owns the infrastructure projects. The Funding Company contributes funds as its share in the *musharakah* and the contribution of the Project Company is in-kind inputs such as land. The Project Company acting on behalf of the musharakah appoints an EPC Company to build the project assets. When completed, the Funding Company leases its share of the project assets to the Project Company and derives rental income during

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12 Shariah scholars allow for both fixed and flexible rental rates in *ijarah* contracts. In the latter, the rental payments are set for a fixed term (say after 3 months) and can then be adjusted periodically.
the operation phase. Under the diminishing musharakah framework, the periodic payments to the Funding Company include reimbursements of the principal that result in the gradual transfer of project assets to the Project Company. The structure of the musharakah-based infrastructure financing is shown in Chart 3.4.

**Chart 3.4: Musharakah Structure for Infrastructure Finance**

![Musharakah Structure for Infrastructure Finance](image)

1- Contribution to Musharakah Company  
2- Construction of project assets  
3- Funding company leases its share to Project Company  
4- Payments of rent and principal (musharakah assets)

*Source: Adapted from Ahmed (2009a) and Khaleq et al (2012).*

**Murabahah**

Under the murabahah structure, the Funding Company buys assets/inputs from a vendor and sells it to the Project Company at a mark-up. For the murabahah to be valid, the Funding Company must own and possess the asset before entering into the sale contract with the Project Company. The price of the asset/inputs can be paid in the future in instalments. Since a debt is created, the Funding Company can ask for guarantees and collateral for protection against defaults. Being a debt instrument, the amount due cannot be increased in case of delinquency and the bills of trade resulting from a murabahah transaction cannot be traded at a discount. Due to these reasons, murabahah will usually be used for financing specific assets that have short-term tenor. The murabahah structure for infrastructure financing is shown in Chart 3.5.

**Chart 3.5: Murabahah Contract for Infrastructure Finance**

![Murabahah Contract for Infrastructure Finance](image)

1- Payment for asset/input  
2- Delivery of asset/input  
3- Delivery of asset/input  
4- Payment for asset/input in installments

*Source: Adapted from Ahmed (2009a) and Khaleq et al (2012)*
**Tawarruq (Commodity Murabahah)**

*Tawarruq* (or commodity *murabahah*) can be used by the Funding Company to provide cash funds to the Project Company. The Funding Company buys a commodity from a broker and sells it to the Project Company at a mark-up payable in the future in instalments. The Project Company then sells the commodity to another broker and gets the cash. However, in practice, organised *tawarruq* is used whereby the Funding Company acts as an agent for the Project Company and sells the commodity and delivers the payment to the latter. Chart 3.5 shows the structure of an organized *tawarruq* operation.

**Chart 3.6: Tawarruq Structure for Infrastructure Finance**

![Diagram of Tawarruq Structure for Infrastructure Finance](image)

1. Purchase of commodity by Funding Company
2. Sale of commodity at mark up
3. Sale of commodity by Project Company
4. Payment of price of commodity in installments

*Source: Adapted from Ahmed (2009a) and Khaleq et al (2012).*

**3.3.3. Shariah Compliant Project Finance**

The structuring of Islamic project financing requires fulfilling both Shariah principles and project-specific financing requirements. The latter will depend on various factors such as the asset’s types and the kinds of contracts used. For example, for brownfield projects a simple sale and leaseback (*ijarah*) structure can be employed and for greenfield projects a combination of *istisna* and *ijarah* can be used (Clifford Chance 2013; GIFR 2016). Furthermore, the financing has to adhere to the principles of project financing such as limited or nonrecourse financing. Similar to conventional financiers, Islamic financial institutions would also consider the financial merits of the project, including the strength of the security package and risk mitigants to make decisions to invest. Given the complexities of infrastructure financing, however, some issues may arise in applying Islamic modes for financing projects. Some of these issues are discussed below.

Under the traditional *istisna* contract, the financiers would agree to develop the infrastructure by using the contractor and then would sell it to the project company. By doing so, however, the financier takes on the performance risk of the contractor along with the credit risk of the project company. Due to this reason, this form of *istisna* contract is rarely utilized and instead other methods such as sub-contracting and procurement structures are used. Under the procurement arrangement, the financiers and project company sign an agency contract that
makes the latter responsible for procuring or manufacturing the project assets. The underlying EPC contracts are used in implementing the project instead of signing detailed procurement/construction contracts to avoid contractual complications. The financiers provide the funding for the development of the project by effecting drawdowns at difference stages of the construction. Under this structure, the project company becomes responsible for delivering the project assets and undertakes all the construction and procurement risks. The contract would also identify the remedies for the financiers in cases where the project company fails to deliver the project assets on time or at all (Clifford Chance 2013).

The financiers would typically use the ijarah contract to lease the assets to the project company and earn rental income. However, Islamic financiers would expect returns during the construction period as is the case in conventional finance. This is enabled by the payment of advance rentals by the project company by using the concept of a forward lease arrangement (ijarah mawsufah fil dhimah) before the project is completed. The condition imposed by Shariah scholars for using advance rentals is that if the project asset is not delivered due to some reason, then all the rental payments have to be returned to the project company. Once the project is completed and the asset is transferred to the financiers, the actual rental payments are made by the project company for the use of the assets.

The financiers, being owners of the project assets, become responsible for its associated rights and obligations such as risks of loss, environmental liability, etc. To avoid these risks, the financiers appoints the project company an agent through a service contract under which the latter deals with ownership related tasks such as carrying out major maintenance and taking out insurance. Although takaful can be used in some jurisdictions to insure the assets, they tend to be restrictive and expensive. In some cases, the Shariah scholars have allowed the use of conventional insurance to protect infrastructure assets.

Most projects using Islamic financing would have purchase and sale undertakings that are employed in cases such as default to identify termination rights. In case of a default by the lessee, the financiers would exercise the purchase undertaking that would require the project company to purchase the assets at a price reflecting the total outstanding amount of the Islamic tranche. The sale of the assets to the project company through the purchase undertaking creates a debt in favour of the financiers (Clifford Chance 2013).

If there is a total loss of the asset due to some reason, the lease contract terminates according to Shariah principles and as a result the purchase undertaking does not have any effect. This risk is mitigated by the service contract which requires the project company to provide the financiers with the insurance proceeds that cover the actual value of the assets. The project company would be liable to pay the financiers any shortfall in the insurance proceeds since it is required to comply with strict insurance obligations as a service agent.

### 3.3.4. Islamic Syndication and Co-financing

Since project finance involves large amounts of investments and Islamic financial institutions are relatively small, Islamic tranches will be a part of multi-sourced financing arrangements which in many cases will have conventional components. For example, Islamic financial institutions may be involved in financing the project with other financial institutions such as conventional banks and multi-lateral development institutions (Clifford Chance 2013; GIFR
In cases where the financing comes from both the Islamic and conventional financing, there are some additional contractual requirements that need to be considered.

While typically Islamic finance involves the ownership of assets, the conventional lender would not have such ownerships. Thus, when Islamic finance is used with conventional finance, the part of the project asset that is financed by the former has to be identified. For example, when using the *istisna* contract, the component of the asset that is built by Islamic finance needs to be identified.

Not only does the Islamic finance tranche have to satisfy the requirements of project financing, the financing also has to comply with the conditions of the other components of financing. Even though the features of Islamic finance are different from conventional finance, in the case of co-financing the conditions governing Islamic finance instruments and conventional financial structures would have similar statuses and positions in the overall capital provided. This is done by signing an inter-creditor agreement that evens out the contractual structures of Islamic and conventional financing.

For example, the utilizations and prepayments have to be *pro rata* and all payment obligations should have *pari passu* ranking across both Islamic and conventional tranches (Clifford Chance 2013). The financing of infrastructure projects is usually done in stages whereby the total amount of financing is drawn down based in the completion of certain milestones. Thus, Islamic finance and conventional finance components would have the same drawdown profiles. In case of default, the inter-creditor arrangements will set out the process through which the enforcement of the security interests and the sharing of the enforcement process between the parties are done. For example, although Islamic finance derives its income from the ownership of a certain component of the project asset, in case of a default they will not have a claim over it. Instead, Islamic financiers would sell their part of the asset through the purchase undertaking to the project company which would create a debt that is *pari passu* with that of conventional financiers.

There are a few issues identified as hindrances for Islamic finance syndications. In conventional finance, there are standardized templates that are used for syndicated finance such as ones prepared by the Loan Market Association (MLA) in the United Kingdom and the Loan Syndication Transaction Association (LSTA) in the United States (Khaleq et. al 2012: 6). While the contracts used for Islamic finance syndications are based on these templates, these are not standardized and are done independently by different stakeholders.

Unlike conventional syndicated loans that are usually made flexible to attract lenders, using debt based structures for syndications such as *murabahah* and *istisna* can introduce some restrictions. The rates of return for these contracts cannot be adjusted to market benchmark rates and this can be an issue in longer term contracts. Furthermore, being debt contracts, they cannot be sold at a discount. These constraints can be avoided if asset-based financing can be used instead of debt-based modes.

### 3.4. Islamic Financial Industry: An Overview

Since the two broad sources of funding are financial institutions and financial markets, the overall status of these sectors in OIC member countries relative to other country groupings is first examined. Chart 3.7 shows that the overall financial sector development index is 0.23 for
OIC countries which is lower than the average of all countries (0.33). While the OIC index is higher than that of Low-Income and Developing Countries (0.15), it is lower than the index of emerging markets (0.33) and advanced countries (0.64). Similar trends can be observed in the indices of development of the financial institutions and financial markets. Between the two sectors, the financial institutions perform better than financial markets with average indices of 0.33 and 0.13 respectively for the OIC countries.

Chart 3.7: Financial Sector Development of OIC Countries and Other Country Groupings (2016) (0-1 Highest)


Chart 3.8: Relative Size of the Financial Sectors (2016) (% of GDP)

Source: World Bank Development Indicators

The relative sizes of the different financial sectors in OIC countries relative to other country groupings for the year 2016 are shown in Chart 3.8. With no data reported for the market
capitalization of domestic companies for low income countries, the figure for OIC countries is 45.1% of the GDP, which is the lowest relative to other country groupings. It should also be noted that the market capitalization of the OIC countries represents the average of 18 countries only, with no data available for the remaining countries. The relative size of the banking sector and non-bank financial institutions of OIC countries is represented by the credit provided to the private sector by these sectors. Overall the banking sector is larger than the nonbank financial institutions sector in OIC countries with the credit to the private sector provided being 38.3% and 17.7% of the GDP respectively. While the sizes of the banks and non-bank financial institutions for OIC countries are better than the averages for low income countries (21.0% and 6.0% of the GDP respectively), they are lower than all other income groupings.

The global size of the different sectors of the Islamic financial industry is shown in Chart 3.9. With a total value of USD 2.202 trillion of the Islamic finance assets in 2016, the Islamic banking sector dominates the industry, constituting 72.6% of the total followed by the sukuk valued at 15.7% of Islamic financial assets. Other Islamic financial institutions (IFIs) that include investment banks, leasing companies, etc. have assets worth USD 124.4 billion with Islamic fund assets being valued at USD 91.2 billion.

Chart 3.9: Islamic Financial Sectors Size (2016) (USD billion)


**3.5. Islamic Banking Sector and Infrastructure Financing**

The distribution of 494 Islamic banks across different regions is shown in Chart 3.10. While the MENA region excluding the GCC has the largest number of banks, holding USD 511 billion in assets, 101 banks in the GCC region have assets valued at USD 795.7 billion. Southeast Asia has 81 Islamic banks holding USD 200.2 billion in assets followed by 65 Islamic banks in South Asia with assets worth USD 47 billion.

The scope of using banks to finance infrastructure projects increases the larger the bank is. The data shows that the average assets of an Islamic bank are valued at USD 3.24 billion which is relatively small. As indicated, financial institutions can invest in infrastructure projects either by direct financing or buying project securities issued by the Project Company. Given the
large investments needed in most infrastructure projects and as most Islamic banks are relatively small, banks usually participate in these projects through syndications whereby a group of banks come together under an agent bank to finance a large project. Usually, a lead financial institution will organize a syndicate and invite other financial institutions to participate under a participation or investment agency agreement. In Islamic finance, the relationship between the lead institution and the others can be in the form of the wakala (agency) or mudarabah structure. In the former, the lead bank acts as an agent for all the banks in dealing with the financing with the Project Company, and, in the latter, the lead bank acts as a manager (mudarib) on behalf of the other investing institutions.

Chart 3.10: Distribution of Islamic Banks and Assets (USD billion)

![Chart 3.10: Distribution of Islamic Banks and Assets (USD billion)](chart.png)

Source: ICD & TR (2017)

Traditionally, syndicated finance is used at the second stage of the raising of funds by the Project Company in the form of debt. In the case of Islamic finance, debt-based financing can take the form of istisna, murabahah, tawarruq, and ijarah (Shah 2008) depending on the type and need of financing. For example, if there is a need to finance an asset such as capital equipment or raw materials, murabahah can be used in syndicate financing. In these cases, the syndicate will purchase asset and then sell it to the Project Company at a mark-up. However, if the assets cannot be identified and the Project Company needs cash, then tawarruq is used. Due to the fixed nature of the debt-based structures, these may not be suitable to provide finance with longer tenures. In these cases, syndicates can use the ijarah structure to finance project assets with a variable rate of return.

Islamic banks can also participate in infrastructure investments with conventional financial institutions through financing a tranche of the project whereby they invest in a part of the infrastructure assets. The other parts of the investments would be provided by other financial institutions which can also be conventional finance. In such cases, the transaction will be divided into two components, one of which would be conventional and the other one Shariah compliant (McMillen 2008). In order to segregate the conventional and Islamic components, the part that is financed by the Islamic tranche has to be insulated from the rest of the project. For example, a specific part of the project will be identified and a Shariah compliant structure
will be applied to finance the construction of that component. The returns for Islamic banks and financial institutions will be tied to this specific part of the project asset.

One of the first infrastructure projects in which the Islamic finance tranche was used was the financing of the USD 1.8 billion Hub River Power Project in Pakistan in 1994, which was also the first private infrastructure project with limited recourse in the country. Al Rajhi Bank and Investment Corporation and IICG Islamic Investment Bank financed a USD 92 million bridge financing facility in the form of istisna to procure and install power turbines for the project.13

Challenges and Prospects

As indicated there a few factors that can inhibit the participation of Islamic banks in project financing. Since most of the Islamic banks are relatively small in size, they do not have the scale to invest in larger projects, even if syndicated. An issue about direct investments can also introduce liquidity risks and the funds can be locked in illiquid investments for a long time. This would also imply higher capital requirements that most banks prefer to avoid. Given the above, banks would prefer to invest in high-rated project sukuk that are liquid and require them to hold lower capital.

Case Study of Islamic Syndicated Finance: Master Wind Energy Limited (Pakistan)14

Master Group in Pakistan established Master Wind Energy Limited (MWEL) to establish a wind farm project in line with the desire of the Government of Pakistan’s (GoP) to increase the share of renewables and reduce dependence on thermal generation in the energy sector. The Alternative Energy Development Board (AEDB) provided 1,408 acres of land in Jhimpir, Sindh to MWEL on a 20 year concession period to establish a wind farm. The total project which consisted of 33 wind turbines to generate 50 MW of electricity had a cost of USD 132 million. While USD 32 million was sourced internally, USD100 was raised from external sources which was split equally between the US-based Overseas Private Investment Corporation (OPIC) and a syndicate of Islamic banks.

The Islamic banks syndicate included Meezan Bank Limited, Habib Metropolitan Bank Ltd. and Bank of Punjab. In the construction phase, Islamic financiers and project sponsors entered into a musharakah partnership (MWEL) under which the partnership co-owned the project assets at an agreed upon ratio. While the financiers appointed Meezan Bank as their agent, the musharakah agreement appointed MWEL to construct the project assets. Under the agreement, MWEL was also responsible for operations and the maintenance of the project assets. After the completion of the project in October 2016, in the operational stage MWEL leased the assets of financiers under an ijarah contract and paid rentals on a quarterly basis.

13See Clifford Chance (2009) and Hamwi and Aylward (1999) for a discussion.
The uncertainty in revenue stream was mitigated with the Upfront Tariff Regime announced by the GoP in 2013 whereby the Feed in Tariff along with permitted indexations and escalations was applicable throughout the 20 years concession period. The arrangement was also backed by guarantees provided by the GoP under the Concession Agreements. However, the project assets were insured and in case of total loss, the insurance claims would be distributed among the financiers and project sponsors according to their shares of musharakah assets. The structure of the financing is shown in Chart 3.11.

**Case Study: Doraleh Container Terminal Project**

Djibouti’s Doraleh container terminal project was one of the first, large PPP infrastructure projects that was wholly financed by Islamic syndication. Initiated in 2007, DP World of the United Arab Emirates (UAE) and Port Autonome International of Djibouti were the key sponsors of the project. They established the Doraleh Container Terminal S.A. (DCT) as a Project Company to develop and operate the port under a 30-year concession agreement. DP World provided the initial USD 5 million equity in the project and then the Project Company raised USD 422 million through Islamic syndication. Dubai Islamic Bank, Standard Chartered Bank and WestLB AG provided the funds in the syndicate through an investment agent, which acted as the Funding Company.

The Islamic project financing used in the project was complex and included four contracts of musharakah, istisna, ijarah and takaful. Under musharakah, a partnership (DCT Musharakah JV) was formed by the Project Company (DCT) and the financiers (Funding Company) to procure the assets of the project. The DCT Musharakah JV then appointed DCT as their agent to construct the terminal using the istisna contract. The payments for the construction were made from the musharakah to DCT as multiple drawdowns. The financier’s co-ownership interests in the project were leased to DCT under an ijarah agreement. Since the contract was for a long period of time, the rental payments had both fixed and floating components. The ijarah contract included advance rental payments during the construction period and regular rental payments payable to the financiers after the completion of the terminal.
The takaful components came in the form of guarantees for USD 427 million provided by MIGA to all investors (USD 5 million to DP World and $422 million to the financiers) against risks of breach of contract, restrictions on currency transfers, expropriation, and civil disturbance and war. Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC) in turn provided reinsurance for USD50 million to MIGA.

**Chart 3.12: Doraleh Container Terminal Financing Structure**


### 3.6. Islamic Capital Markets/Sukuk and Infrastructure Financing

Instead of getting direct financing from financial institutions, another option for raising funds for infrastructure is to use the capital markets by issuing sukuk. AAOIFI identifies various types of sukuk that can be classified broadly as being based on assets, debt, equity, and services. Asset based sukuk include certificates issued against an asset (ijarah sukuk) or the usufructs of an asset (sukuk manfah). While ijarah sukuk are issued against an existing tangible asset, leased asset, and/or promise of leasing an asset in the future, manfah sukuk are issued by owners of the usufruct of existing or future assets. Investors in these sukuk become owners of the assets in the former and usufructs in the latter. Debt-based sukuk arise from sale transactions that create debt. Funds raised by murabahah sukuk are used to purchase assets or goods that are then sold at a mark-up to the obligor. Similarly, istisna sukuk are used to raise funds that are used in the construction of real estate. The investors become the owners of the real estate upon completion and lease it to the obligor against periodic rental payments.

Equity-based sukuk can take the form of mudarabah or musharakah whereby partnership is formed between the investors and the obligor. Investors of mudarabah sukuk participate in a project by contributing funds and then appointing the Project Company as a manager. The profit of the project is shared by the investors and obligor at an agreed upon ratio. Musharakah sukuk is similar to mudarabah sukuk with the difference that investors have a say in the management of the project. Under the agency-based sukuk such as wakala, the investors
Infrastructure Financing through Islamic Finance in the Islamic Countries

provide funds for the project and the Project Company acts as an agent managing the project. The investors receive the income generated from the project and the agent gets paid a certain fee for the services provided. The features and properties of various types of *sukuk* are shown in Table 3.3.

**Table 3.3: Sukuk Types and Features**

<table>
<thead>
<tr>
<th>Sukuk Types</th>
<th>Underlying Contract</th>
<th>Risk Attribution</th>
<th>Nature of Return</th>
<th>Returns (fixed/variable)</th>
<th>Tradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset-backed</td>
<td>Leasing</td>
<td>Assets</td>
<td>Rent</td>
<td>Fixed/variable</td>
<td>Yes</td>
</tr>
<tr>
<td>Debt</td>
<td>Sale</td>
<td>Obligor</td>
<td>Profit</td>
<td>Fixed</td>
<td>No</td>
</tr>
<tr>
<td>Equity</td>
<td>Partnerships</td>
<td>Project</td>
<td>Profit</td>
<td>Fixed/variable</td>
<td>Yes</td>
</tr>
<tr>
<td>Investment</td>
<td>Agency contract</td>
<td>Project</td>
<td>Profit</td>
<td>Fixed/variable</td>
<td>Depends on underlying contract</td>
</tr>
<tr>
<td>Agency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a-The return can be fixed if the underlying assets of the projects such as real estate yields fixed return.

*Source: Ahmed (2017)*

The rights and risks that investors face will depend on the nature of sukuk. While most debt-based sukuk will yield fixed returns, the asset and equity based sukuk can be structured as variable rates. Similarly, sukuk representing ownership of real assets or usufruct are tradable. However, if the securities represent debt or money, then they cannot be traded and can only be exchanged at par value. If securities represent composite debt-equity assets, the rules of the dominating asset (having 51%) will apply to the hybrid security. This allows obligors to issue tradable hybrid securities containing the majority of real physical assets or usufruct.

As indicated, sukuk represents the second largest sector after banking. The distribution of the 2,437 total number of sukuk outstanding in different regions is shown in Chart 3.13. An overwhelming number of sukuk (2,029) in 2016 was issued in Southeast Asia and was valued at USD 206.8 billion, and this was followed by the GCC with 194 sukuk worth USD 111.1 billion. These numbers indicate that the size of an average sukuk issue in Southeast Asia is relatively small (USD 102 million) compared to the GCC which had an average sukuk issue of USD 573 million.

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15 The Islamic Fiqh Academy has a ruling along similar lines (see Ruling No. 30 (5/4), IFA and IRTI 2000, p. 63). For a discussion on guidelines for issuing Islamic securities, see Ahmad and Khan (1997) and Khan (1999-2000).
Chart 3.13: Total Number of Sukuk and Value of Sukuk Outstanding (USD billion)

<table>
<thead>
<tr>
<th>Region</th>
<th>Sukuk Outstanding (USD billion)</th>
<th>No. of Sukuk Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeast Asia</td>
<td>206.8</td>
<td>2,029</td>
</tr>
<tr>
<td>GCC</td>
<td>111.1</td>
<td>194</td>
</tr>
<tr>
<td>Europe</td>
<td>13.5</td>
<td>51</td>
</tr>
<tr>
<td>South Asia</td>
<td>7.8</td>
<td>44</td>
</tr>
<tr>
<td>Other Asia</td>
<td>2.1</td>
<td>3</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>1.7</td>
<td>87</td>
</tr>
<tr>
<td>Other MENA</td>
<td>1.4</td>
<td>26</td>
</tr>
<tr>
<td>Americas</td>
<td>0.3</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: ICD & TR (2017)

Chart 3.14 shows the distribution of the different sectors that issued sukuk. While the majority of sukuk (56.86%) is sovereign, the remaining sukuk were issued by different sectors of the economy. The sukuk issuance by the infrastructure sectors (infrastructure, power and utilities, transportation, and telecommunications) was 11.57% of the total. While part of the sukuk issued by the government is likely to be used to finance infrastructure projects, the use of sukuk to raise funds for infrastructure sectors by non-government entities is still relatively small.

Chart 3.14: Sukuk Issuances by Sector (%)

Source: IFSB (2018)
Case Study: Composite Mudarabah-Ijarah Sukuk

A composite mudarabah-ijarah sukuk was issued in Malaysia by Projek Lintasen Shah Alam Bhd. (PLSA) to raise RM 745 million to finance the 14.7km Lebuhraya Kemuning-Shah Alam highway in 2008. PLSA was responsible for the design, construction, management and maintenance of the toll road for a 40-year concession period given by the Federal Government of Malaysia. Structured by RHB Islamic Bank Berhad and RHB Investment Bank Berhad, PLSA issued two sukuk to finance the project, one based on mudarabah and the other on ijarah. The total value of the mudarabah sukuk was RM 415 million (USD 118 million) with a tenor of a maximum of 29 years. It was used to raise funds for the project and pay for the existing bridge-financing facilities. The mudarabah sukuk was structured as a joint venture in the toll-road project between PLSA (Project Company) and the investors with the former acting as the manager (mudarib). The funds provided by sukuk holders (RM 415 million) was used to construct the highway and cover working capital needs during the operation stage. With the sukuk holders getting a profit share of 90% upon completion of the toll road, the expected rate of return for the investors was around 7% per annum.

The ijarah sukuk was worth RM 330 million (USD 94 million) with a maturity of 19 years to raise additional funds from other investors. The ijarah sukuk used the toll road as the underlying asset which was transferred to sukuk holders through an SPV. The sukuk holders then leased the road back to the mudarabah venture for 19 years in return for periodic rental payments. The investors received the rental payments from the beginning of the construction period under the principle of the forward lease (ijarah mausufah fil dhimmah). Since the rental payments include the amortised capital component, the toll road will be transferred back to the Joint Venture at the nominal value of RM 1 at the end of the lease period. Having equity-like features, mudarabah sukuk investors had lower priority than ijarah sukuk holders in case of default or bankruptcy. RAM Ratings Services Bhd gave a rating of A3 to the former sukuk and A1 to the latter (RAM 2009). The basic structure of the PLSA composite sukuk is shown in Chart 3.15.

Chart 3.15: Composite Mudarabah-Ijarah Sukuk

Source: Adapted from Ahmed (2009a)

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16 The case study has been prepared by the author based on Ahmed (2009a) and RAM (2009)
Case Study: Neelum Jhelum Sukuk, Pakistan

The government-owned public utility agency of Pakistan Water and Power Development Authority (WAPDA), responsible for power and water production and distribution in the country, planned to raise funds for the construction of a 969MW Neelum Jhelum Hydropower project and decided to issue a sukuk to partially finance costs. Accordingly, it established the Neelum Jhelum Hydropower Company (Private) Limited (NJHPC) as a Project Company that issued sukuk certificates worth PKR100 billion making it the largest fund mobilization for a public sector entity. Pak Brunei Investment Company Limited (PBICL) acted as the investment agent for the investors composed of a consortium of 16 banks led by the National Bank of Pakistan. The sukuk had a maturity of 8 years with an additional 2 year grace period. Chart 3.16 provides an overview of the Neelum Jhelum Sukuk.

NJHPC and PBICL formed a *musharakah* whereby 75% of the share of the musharakah assets were sold to the investors and the obligor contributed the remaining 25% in kind. The investors’ share of musharakah assets worth PKR 100 billion was sold as the beneficial interest of the project in two pools A and B. The projects assets were held in a trust by PBICL which acted as a trustee for the benefit of the investors. An *ijarah* contract leased the investors’ share of the assets to NJHPC and accordingly the semi-annual variable rental payments. The sukuk was structured as a diminishing *musharakah* with a lag, with the principal redemption starting from the third year. The investment agent was responsible for taking out *takaful* to cover the risks related to ownership assets. The sukuk was rated AAA by JCR-VIS, a local credit rating agency.

**Chart 3.16: Neelum Jhelum Sukuk Structure**

Source: Adapted from Ahmed (2017)

17 This case study is taken from Ahmed (2017).
Challenges and Prospects

Given the issues related to illiquid assets and capital requirements related to direct long-term investments by financial institutions, a better way to raise funds for investment projects is to use the capital markets. Since debt-based sukuk cannot be sold, it would be desirable to issue asset-based and equity-based project sukuk. Issuing these kinds of sukuk not only reflects the risk-sharing features of Islamic finance but will also enhance the liquidity features of the securities that will attract investments from Islamic financial institutions in infrastructure projects. However, the data shows that the Islamic capital markets are relatively small and underdeveloped in many OIC countries relative to the Islamic banking sector. To increase the role of Islamic finance in infrastructure investments would, therefore, require developing the Islamic capital markets.

3.7. Islamic Nonbank Financial Institutions

The nonbank financial institutions (NBFIs) such as takaful (Islamic insurance), pension funds, investment banks, sovereign wealth funds, etc. form another potential source of funds for infrastructure investments. However, the size of other Islamic financial institutions (OIFIs) and the takaful sector is relatively small. Charts 3.17 and 3.18 show the relative sizes of these sectors in different regions. Of the total of 571 OIFIs in the world, 220 OIFIs are located in the GCC with assets worth USD 38.419 billion and 79 OIFIs in Southeast Asia have assets valued at USD 46.319 billion. The numbers indicate that the assets of an average size OIFI in Southeast Asia (USD 586.3 million) is larger than one in the GCC with an average size of USD 172.6 million.

Chart 3.17: Distribution of OIFIs and Assets (USD million)

Source: ICD & TR (2017)

The distribution of the takaful operators and their assets is shown in Chart 3.18. Most of the total global 339 takaful companies are located in the GCC with 94 takaful companies having assets worth USD 18.902 billion. While the Southeast Asia region has 88 takaful operators, their assets are valued at USD 10.491 billion which is lower than that of the Other MENA region which has 75 operators with assets of USD 11.591 billion.
In order to have an understanding of the contribution of the takaful sector in infrastructure investments, Chart 3.19 shows the distribution of their investments in the GCC region. Although a significant part of the investments is in the other category, more than one-fifth (22%) of the investments of takaful operators are in government bonds and sukuk. A significant amount of assets (17%) are held as cash and 16% are invested in funds. Although some of the investments in sukuk can possibly be related to infrastructure, there is no clear indication of the takaful sector’s investments in these projects.

**Chart 3.19: Distribution of Investments by Takaful Operators in GCC (%)**

*Source: Global Advisors World Takaful Report 2016*
3.8. Social Sectors

The institutions of zakat and waqf (pl. awqaf) are among some instruments instituted by Islam to enhance social welfare and mitigate poverty in societies. Zakat is considered an annual obligatory alms on the wealth of eligible Muslims who satisfy the threshold condition of nisab that should be given to defined beneficiaries.\(^1\) The Qur'an (9: 60) identifies eight categories of recipients for zakat as the poor, the needy, people burdened with debt, the wayfarers, people in bondage or slavery, those who have inclined towards Islam, for the cause of God, and zakat administrators. A condition of zakat is that the ownership (tamlik) of the alms must be transferred to the beneficiary. While different rates of zakat apply depending on the type of asset, the common rate applicable is 2.5% of the wealth of people who fulfil the nisab annually.\(^2\)

Waqf is a voluntary act of charity that has features of longevity relating to assets that produce a return or usufruct. The founder (waqif) of the waqf donates a durable asset as endowment and identifies the beneficiaries of the returns or usufructs resulting from it. Through the waqf deed, the founder determines the rules that govern the endowment which include not only the how and to whom the benefits and revenues of the waqf will be distributed but also how it is managed and the process of succession of managers. While the main endowment in creating waqf is usually with immovable assets such as land and real estate, moveable assets such as cash, books, etc. are also used for its creation. The benefits of waqf may be religious or social. While the former includes establishing mosques or cemeteries, the latter can entail a variety of benefits for society at large such as the socio-economic relief of the poor and needy and the provision of basic social services.

Various kinds of waqf have been established that include those providing various social services such as public utilities, education and research, and health care. Other unique waqf serving different needs in society have also been created such as waqf of grain to be used as seeds, waqf to provide loans to persons who need financing, and providing services and supplementary income to low income people. Two key sectors in which waqf has contributed are the education and health sectors. The former not only includes religious education but also covers scientific research such as physiology, pharmacology, mathematics, astronomy, etc. Similarly, health has formed one of the key waqf sectors whereby hospitals, health care centres and medicine have been provided by such endowments.

After the Prophet (PBUH) encouraged Muslims to create charitable assets that keep producing benefits/revenues that are used for some beneficial goal, many of his companions established waqf. The tradition became an essential feature of Muslim societies whereby huge assets were allocated to create endowments that enhanced overall welfare. With the contribution of Muslims to the waqf sector over the centuries, its size has become significant in many countries. For example, Schoenblum (1999) reports that in the 19th century three quarters of the arable land of the Ottoman empire were dedicated to waqf while Algiers had half of its land and Tunis one-third of its land for the same purpose. The large assets that serve socio-economic needs have contributed to the empowerment of the poorer segments of society.

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\(^1\) Nisab is calculated as the value of either 21 ounces of silver (612.36 grammes) or 3 ounces of gold (87.48 grammes).

\(^2\) The rate of zakat on agricultural produce is 10 percent if it is watered by rain, rivers or springs or not watered at all and 5 percent if the crops are irrigated by water extracted from wells by animal power (Ahmed 2004).
Case Study: Waqaf Al-Nur, Johor, Malaysia

The state of Johor, Malaysia established the Johor Corporation (JCorp) as a state investment entity in 1968. Over the years, JCorp has become a large conglomerate in the country with businesses in oils, food, restaurants, hospitality, property, logistic services and health services. Being a state government entity, JCorp also has taken initiatives in the social sector. A key innovation is enhancing social responsibility, JCorp established a corporate waqf in 2006 with an initial contribution of RM 200 million. The Waqaf Al-Nur Corporation Berhad (WANCorp) is registered as a limited liability company with its assets and stocks kept as endowment. WANCorp holds equity of several listed companies in the endowment and a part of the income generated in the form of dividends is reinvested in the endowment and the remaining part is distributed for social purposes.

An important initiative of WANCorp is the establishment of the network of Waqaf An-Nur clinics and hospitals to serve the healthcare needs of the poor. In collaboration with KPJ Healthcare Berhad, which is a subsidiary organization of JCorp, WANCorp has developed the Hospital Waqaf An-Nur (HWAN) in Pasir Gudang, Johor; 24 health clinics (Klinik Waqaf An-Nur or KWAN) all over the country; and five mobile clinics in Kuala Lumpur, Selangor and Johor. A total of 1.443 million treatments have been carried out by the end of December 2017 at a nominal cost of RM 5 per patient. The waqf serves people from all walks of life and has treated 116,859 non-Muslims. Among other things, subsidized treatments for kidney related problems are provided through dialysis centres that operate alongside clinics.

Another initiative of WANCorp related to the infrastructure sector is the Waqaf Saham Larkin Sentral (Larkin Sentral) that has a target to raise a total of RM85 million to finance the upgrade and refurbishment of the Larkin Sentral Transportation Terminal and Wet Market at Johor Bahru. The fund will also be used for the purchase of land, construction of multi-storied parking, and shops devoted to single mothers and lower income groups. The waqf funds are raised by offering Larkin Sentral shares with a minimum amount of RM100 or 1,000 unit shares of RM0.10 per share that can be purchased by individuals and institutions (JCorp 2017).

Challenges and Prospects

Although there are still large amounts of assets that are locked in as waqf, these do not contribute to socio-economic welfare due to neglect and mismanagement. The potential of using social institutions to provide social infrastructure, however, is huge. Ahmed (2004) reports that based on different opinions, the zakat collection in different countries ranges from 1.8% of GDP to 4.8% of GDP. With the GDP of OIC member countries being USD 6.353 trillion in 2016, this translates to potential figures of USD 114.34 billion and USD 304.9 billion that can be collected from zakat and used for social sectors. However, for zakat to make an impact on social welfare, there is a need to mobilize these resources in an organized and efficient manner and then use them effectively. This would require building organizations and institutions that can build trust by showing their impact on society.

Key challenges related to existing waqf include the appropriation and dilapidation of assets that yield small returns. For example, in Bosnia, around 11,324 waqf assets with an area of 30,342,496 square meters valued at EUR 372 million were usurped by the state of Yugoslavia during the 1945-1990 period. Furthermore, 1311 waqf properties were destroyed and another

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20 Information on the case study is taken from World Bank and IRTI (2016) and JCorp (2017).

While there are no updated statistics on waqf assets in different countries, one estimate shows that the total waqf assets in Indonesia are around USD 60 billion (IRTI 2014: 36). With a rate of return on these assets of around 10%, this would translate to around USD 6 billion that could be used for social welfare purposes. IRTI (2014: 36) estimates the returns to be 0.849% of the country's GDP in 2014. While the size of the waqf sector in various countries would be different, an approximate figure of the returns generated by the sector can be estimated by using the estimates for Indonesia. Given the GDP value of IDB member countries valued at USD 6.353 trillion in 2016, this translates to a return of USD 54 billion annually.

3.9. International Initiatives

At the international level, two broad sources of Islamic finance can be identified, multilateral development banks and Islamic infrastructure funds. Islamic Development Bank (IDB) is the only multilateral development bank that provides Shariah-compliant project financing. The net approvals of the total financing of IDB in its member countries since its inception in January 1976 to June 2018 are valued at USD 131.28 billion. Note that IDB project financing includes infrastructure and other sectors such as agriculture, finance, industry and mining, public administration, trade, real estate and other social services. The distribution of the financing to the infrastructure sector over the period 1976-2018 (Q2) is shown in Chart 3.20. During the period, the energy sector received the largest financing with USD 43.95 billion constituting 33.5% of the total financing followed by the transportation sector with USD 12.222 billion or 9.3% of the total financing during the period. The social infrastructure sectors of education and health received around 3% of the total financing each.

Chart 3.20: IDB Infrastructure Financing 1976-2018 (Q-2) (USD million)

Source: IDB (2018)
Islamic Development Bank is the only multilateral organization providing Shariah-compliant infrastructure financing to its member countries. However, given the small size of the bank, the financing provided is relatively small. The total financing of IDB in its member countries since its inception in 1976 to June 2018 of USD 131.28 billion translates to around USD 3.127 billion per year. With 57 member countries, this implies financing of USD 54.84 million per member country per year. One way to enhance Shariah-compliant resource mobilization from different international sources would be to tap into creating more Islamic infrastructure funds in which multilateral development banks can contribute and other institutional investors are able to invest.

The IDB launched a number of infrastructure funds with the first one IDB Infrastructure Fund II worth USD 730 million. The IDB Infrastructure Fund II valued at USD 2 billion was launched in 2014.21 ASMA Capital based in Bahrain was assigned to the fund. IDB also established Islamic infrastructure funds in collaboration with Asian Development Bank which included the USD 250 million fund initiated in 2009 with contributions from both banks (Asian Development Bank providing USD 100 million and Islamic Development Bank providing USD 150 million). The objective of the fund was to invest in infrastructure projects in member countries that were common to both. CIMB Standard was assigned to manage the fund.

The Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC), a subsidiary of IDB, provides investment insurance for political risk for equity investments in projects of its member countries through its Foreign Investment Insurance Policy (FIIP) for Equity.22 The insurance can help mitigate political risks and facilitate cross-border investments in infrastructure projects.

3.10. Islamic Financial Industry and Infrastructure Investments

To estimate the contribution of the Islamic financial sector in infrastructure development in OIC member countries, we use the global averages of the data available from different sources. The average of infrastructure financing for 11 OIC member countries for which data is available in the IFSB Prudential and Structural Islamic Financial Indicators (PSIFIs) is 4.74% of Islamic banking assets. The percentage of sukuk used for the infrastructure sector was 11.57% (see Chart 3.14). Since there is no information on the investments of the takaful sector in infrastructure projects, we use the global average of the insurance industry to estimate the takaful sector’s contribution. The investment of insurance companies in the infrastructure sector is close to 2% of their assets (EY 2015 and S&P 2014).23 Furthermore, the project financing by IDB accounts for around USD 3.12 billion (see discussion under Chart 3.20). Given these assumptions and the size of the different sectors of the Islamic financial sector in Chart 3.9, the estimates of the contribution of different sectors are shown in Table 3.4 below. The Table shows that the total contribution of the Islamic financial sector in infrastructure financing is close to USD 120 billion, with the bulk of it (USD 75.8 billion) coming from the banking sector followed by sukuk issuance (USD 39.9 billion). Infrastructure project financing by IDB and the takaful sector is relatively small with investments of USD 3.12 billion and USD

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23 S&P (2014) estimates the global allocation of various institutional investors for infrastructure to be as follows: Foundation 3%, Private sector pension fund 3%, Private sector pension fund close to 3%, sovereign wealth funds close to 5% and superannuation schemes close to 7%.
0.9 billion respectively. Given the size of the Islamic financial industry of USD 2.2 trillion (see Chart 3.9), infrastructure investments account for around 5.4% of the overall assets of the industry.

Table 3.4: Total Islamic Finance Investments in Infrastructure Sector (2017-2018, USD Billion)

<table>
<thead>
<tr>
<th></th>
<th>Total assets (USD billions)</th>
<th>Percentage going to Infrastructure</th>
<th>Infrastructure Investments by Islamic Finance (USD Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Islamic Banking</td>
<td>1,598.9</td>
<td>4.74%</td>
<td>75.8</td>
</tr>
<tr>
<td>Takaful</td>
<td>42.5</td>
<td>2.0%</td>
<td>0.9</td>
</tr>
<tr>
<td>Sukuk</td>
<td>344.8</td>
<td>11.57%</td>
<td>39.9</td>
</tr>
<tr>
<td>IDB Project Financing</td>
<td></td>
<td></td>
<td>3.12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>119.7</strong></td>
</tr>
</tbody>
</table>

*Source: Author's estimates*
4 Country Case Studies

4.1. Indonesia

4.1.1. Indonesian Financial Sector and Islamic Finance: An Overview

The government of Indonesia has taken initiatives to strengthen the financial sector to enhance its role in the development in the economy. A separate regulatory body, Otoritas Jasa Keuangan (OJK), was established in 2011 to oversee all financial service sectors. OJK developed a Financial Sector Masterplan 2015-2019 and is in the process of implementing it. The aim of the Masterplan is to promote a financial sector that is contributive, stable, inclusive and enabling. Some of the specific goals in the contributive role of the financial sector include the funding of infrastructure and other priority economic sectors and the strengthening of the role of the Shariah financial services sector (OJK 2016).

Chart 4.1.1 shows the overall status of the development of the financial sector, the financial institutions and financial markets in Indonesia relative to the averages of the OIC countries and the Asia and Pacific (A&P) Region. The overall development index of the financial sector in Indonesia (0.36) is similar to that of the A&P region and higher than the OIC average of 0.23. Both the financial institutions and financial market indices of Indonesia (0.43 and 0.29 respectively) are higher than the corresponding indices for OIC countries (0.33 and 0.13 respectively). While the financial institutions index for Indonesia (0.43) is slightly lower than that of the A&P region (0.46), the financial markets index for the country (0.29) is better than that of the A&P region (0.26).

Chart 4.1.1: Relative Financial Sector Development in Indonesia (2016) (0-1 Highest)


The structure of the Indonesian financial system is shown in Chart 4.1.2. Among the financial institutions, the deposit-taking financial institutions dominate the financial sector with assets worth 55.4% of the GDP followed by the insurance sector with assets valued at 7.2% of the GDP. The pension funds and mutual funds are relatively small with shares of 1.8% and 2.4% of the GDP. In the financial markets, the stock market capitalization is 40.8% of the GDP and the market value of the outstanding debt securities is 15.7% of the GDP.
Islamic finance started relatively late in Indonesia with the establishment of the first Islamic bank in the country in 1992. The industry has been growing since then and has diversified into various sectors. The country has 4 fully-fledged Islamic banks, 22 Islamic banking units (windows) and 160 Islamic rural banks (BPRS). Indonesia has taken a significant strategic move in 2016 to enhance the role of Islamic finance with the enactment of Presidential Decree Number 91 year 2016 that led to the formation of a national committee, namely the National Committee on Islamic Finance (simply called KNKS). KNKS is chaired by the President of Indonesia and comprises ten authorities which are Bank Indonesia, Ministry of Finance, Ministry of Religion, Financial Services Authority (OJK), Ministry of National Development Planning (Bappenas), Ministry of State Owned Enterprises (BUMN), National Ulama Council (MUI), Coordinating Ministry for Economic Affairs, Ministry of Cooperative and Small and Medium Enterprises (SME), and Deposit Insurance Corporation (LPS).

KNKS is a strategic committee to coordinate, harmonize and synchronize all policies and actions pursued by those authorities to accelerate Indonesian Islamic finance. KNKS launched its Blueprint for the period 2018-2024 to develop the Indonesian Islamic economy and finance. The vision of the Blueprint is to make Indonesia as the World Islamic Economic and Finance Hub with the 5 missions of increasing Islamic businesses, expanding Islamic financing, deepening the Islamic financial markets, increasing Islamic economics and finance literacy, and strengthening the international positioning. The strategic move goes beyond just focusing on the Islamic banking industry, something which has been done in the past two decades. Indonesia has realized the huge potential of its Islamic economic and halal industries that have not been prioritized so far.

Under the Blueprint, Indonesia also plans to enhance the potential of the Islamic social sectors, particularly zakat (alms giving) and waqf (endowment). However, the intention is not only to increase the collections of such funds but to integrate the Islamic commercial and social
sectors. For example, Bank Indonesia, Ministry of Finance, Ministry of Religious Affairs, Indonesian National Zakat Body (Baznas) and the Association of Productive Waqf (FWP) are developing models of waqf-linked sukuk and sukuk-linked waqf. While the former utilizes cash waqf to build social infrastructure (public schools, hospitals, etc) by purchasing government sukuk (SBSN), the latter plans to use land waqf as the underlying asset to issue sukuk to construct public (social purpose) buildings on the land.

The growth and current status of the different sectors of Islamic finance are shown in Table 4.1.1. Islamic financial markets have outpaced financial institutions in terms of both value and as a percentage of GDP. Up to December 2017, government Sukuk (called SBSN) has dominated the industry and has captured nearly 17% of the market share, and this is followed by Islamic nonbanks (Islamic cooperatives, Islamic pension funds, Baitul Maal Wattamwil (BMT), etc) owning an almost 11% share of the total industry. Meanwhile, Islamic securities, Islamic financing companies and Islamic banks have gained 6.16%, 6.34% and 5.56% of the market shares of their corresponding sectors respectively.

Table 4.1.1: Development of Islamic Finance Sectors (in USD billion)

<table>
<thead>
<tr>
<th>Type of Industry</th>
<th>2013</th>
<th>2015</th>
<th>2017</th>
<th>June</th>
<th>December</th>
<th>Share (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Islamic banking</td>
<td>17.72</td>
<td>21.16</td>
<td></td>
<td>27.01</td>
<td>30.30</td>
<td>5.56</td>
</tr>
<tr>
<td>Islamic insurance</td>
<td>1.19</td>
<td>1.89</td>
<td></td>
<td>2.67</td>
<td>2.89</td>
<td>3.4</td>
</tr>
<tr>
<td>Islamic financing</td>
<td>1.78</td>
<td>1.63</td>
<td></td>
<td>2.77</td>
<td>2.46</td>
<td>6.34</td>
</tr>
<tr>
<td>Islamic non-bank</td>
<td>0.57</td>
<td>1.11</td>
<td></td>
<td>2.25</td>
<td>1.72</td>
<td>10.99</td>
</tr>
<tr>
<td>Corporate Sukuk</td>
<td>0.54</td>
<td>0.71</td>
<td></td>
<td>1.08</td>
<td>1.23</td>
<td>4.3</td>
</tr>
<tr>
<td>Islamic mutual funds</td>
<td>0.67</td>
<td>0.79</td>
<td></td>
<td>1.35</td>
<td>2.01</td>
<td>6.16</td>
</tr>
<tr>
<td>Government Sukuk</td>
<td>12.09</td>
<td>21.15</td>
<td></td>
<td>35.94</td>
<td>39.40</td>
<td>16.97</td>
</tr>
<tr>
<td>Stock market capitalization</td>
<td>182.70</td>
<td>185.77</td>
<td></td>
<td>249.39</td>
<td>264.39</td>
<td></td>
</tr>
</tbody>
</table>

Source: Bank Indonesia (2017)

*Share of Islamic finance relative to total.

In terms of value at the end of 2017, the sukuk market is the largest, valued at USD 40.63 billion (USD 39.4 billion sovereign and USD 1.23 billion corporate) followed by the Islamic banking industry with total assets valued at USD 30.2 billion, Islamic insurance has assets worth USD 2.8 billion and the Islamic nonbank financial institutions sector is worth USD 24.14 billion. From the periods of 2013 to 2017, the total number of Islamic mutual fund companies increased 29% to include 181 companies, with the total growth of net asset values (NAB) of 31% valued at IDR 28.31 trillion (USD 2 billion).

4.1.2. Current Status and Projected Investment in Infrastructure Sectors

Chart 4.1.3 shows the status of infrastructure in Indonesia relative to the OIC countries and the East Asia and Pacific (ES&P) region. While the statuses of the overall infrastructure and its quality in Indonesia (4.5 and 4.1 respectively) are better than that of the OIC countries (3.6 and 3.7 respectively), they are poorer compared to the statuses of the EA&P region (4.9 and 4.6 respectively). Similar trends can be seen for electricity and telephony infrastructure. However, the transport infrastructure in Indonesia (4.7) is better than both the OIC countries (3.5) and the EA&P region (4.6).
Infrastructure Financing through Islamic Finance in the Islamic Countries

**Chart 4.1.3: Relative Status of Infrastructure in Indonesia (2017) (1-7 Best)**

![Graph showing relative status of infrastructure in Indonesia (2017)](chart)

Source: WEF (2018), The Global Competitive Index Historical Data

**Chart 4.1.4: Private Sector Investment in Infrastructure: Indonesia (USD million)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>2005-10</th>
<th>2011-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water &amp; Sanitation</td>
<td>20.2</td>
<td>155.0</td>
</tr>
<tr>
<td>Transport</td>
<td>1,731.50</td>
<td>2,450.50</td>
</tr>
<tr>
<td>Energy</td>
<td>6,302.40</td>
<td>14,148.00</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>9,129.40</td>
<td>14,227.80</td>
</tr>
</tbody>
</table>

Source: World Bank, World Development Indicators Database

Indonesia ranks 21 among 41 countries according to the Infrastructure Investment Index developed by ARCADIS (2016) that measures the attractiveness of infrastructure investments. Chart 4.1.4 shows the private sector investments in different infrastructure sectors for the period 2005-2010 and 2011-2016. The telecommunications and energy sectors appear to have attracted the most investments followed by the transport sector. While the telecommunications sector attracted significant investments worth USD 14.277 billion during the 2005-2010 period, the energy sector had the highest investments (USD 14.148 billion) from the private sector during the 2011-2016 period.
Table 4.1.2 shows the investments gaps that may occur for the 2016-2040 period under current investment trends and investment needs. The projected gap in infrastructure funding during the period is estimated to be at USD 70 billion, with most of it coming from the investments in water that show a gap of USD 65 billion.

Table 4.1.2: Infrastructure Needs and Gaps Indonesia 2016-2040 (USD billion 2015 prices and exchange rates)

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Current trends (CT)</th>
<th>Investment need (IN)</th>
<th>Gap between IN and CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>752</td>
<td>752</td>
<td>0</td>
</tr>
<tr>
<td>Rail</td>
<td>9</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Airports</td>
<td>23</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>Ports</td>
<td>11</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Telecoms</td>
<td>96</td>
<td>99</td>
<td>3</td>
</tr>
<tr>
<td>Electricity</td>
<td>607</td>
<td>607</td>
<td>0</td>
</tr>
<tr>
<td>Water</td>
<td>144</td>
<td>209</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td>1642</td>
<td>1712</td>
<td>70</td>
</tr>
</tbody>
</table>

Source: Global Infrastructure Outlook

Table 4.1.3 shows the estimates of the medium term national development planning (RPJMN) 2015-2019 for the total funds needed to finance 1600 projects to be IDR 4,796 trillion (USD 3,425 billion). The distribution of the financing needs for different sectors is shown in Table 4.1.3. The top three sectors that will require the most infrastructure financing are electricity (IDR 1,000 trillion or USD 714 billion), roads (IDR 733 trillion or USD 523 billion) and water and transportation (IDR 591 trillion or USD 422 billion).

Table 4.1.3: Projected Financing in Different Infrastructure Sectors (RPJMN 2015-2019 (IDR trillion))

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Financing Needs (IDR trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td>733</td>
</tr>
<tr>
<td>Rail roads</td>
<td>226</td>
</tr>
<tr>
<td>Water transportation</td>
<td>591.2</td>
</tr>
<tr>
<td>Air transportation</td>
<td>144</td>
</tr>
<tr>
<td>Land transportation</td>
<td>47</td>
</tr>
<tr>
<td>City transportation</td>
<td>86</td>
</tr>
<tr>
<td>Electricity</td>
<td>1000</td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>507.3</td>
</tr>
<tr>
<td>Information and telecom</td>
<td>280.3</td>
</tr>
<tr>
<td>Sources of water</td>
<td>450.9</td>
</tr>
<tr>
<td>Clean water and disposal</td>
<td>403</td>
</tr>
<tr>
<td>Housing</td>
<td>327.5</td>
</tr>
<tr>
<td>Total</td>
<td>4,796.2</td>
</tr>
</tbody>
</table>

Source: Bank Indonesia, Ministry of Finance and OJK (2018)

The projected sources of funding to finance the proposed infrastructure projects are shown in Chart 4.1.5. While the government will finance IDR 1978 trillion (USD 141.28 billion) or 41.3% of the total investment needs, the SOEs will provide IDR 1066 trillion (USD 76.15 billion) or 22.2% of the total, and the corporate sector is projected to provide the remaining IDR 1752 trillion (USD125 billion) or 36.5% of the total.
As shown in Chart 4.1.1 the infrastructure of Indonesia has lagged behind other countries in the South-east Asian region. For example, during the period 2008-2012, the Infrastructure investments in Indonesia were around 1.5% of the GDP compared to the 9% of GDP in Malaysia and 7% of GDP in Thailand (ADB undated). Recognizing that infrastructure investments are insufficient and also to enhance the role of the private sector in the sector, the government has taken some specific steps to improve the overall legal and institutional environment for facilitating public-private partnerships.

Infrastructure investments are guided by the medium term national development planning (RPJMN) 2005-2025 adopted by the government of Indonesia. The broad targets of RPJMN include increasing the national per capita income to the level of upper middle-income countries in 2025; reducing the unemployment rate to less than 5%, and bringing the poverty rate to below 5% of the total population. RPJMN was divided into four periods that had their own targets. The key overall targets for each period are shown in Table 4.1.4.

To achieve the broad goals of each period, specific projects are identified for implementation. For example, for RPJMN 2015-2019 a total of 1600 national infrastructure projects have been identified. However, a sub-group of projects under RPJMN are classified as National Strategic Projects (PSN) and, within this group, some are identified as Priority Projects. Under Presidential Decree Number 58 year 2017, the government classified 245 projects (out of 1600 projects) as National Strategic Projects and 30 projects out of these are considered Priority Projects.
Table 4.1.4: Targets of Medium Term National Development Planning (RPJMN)

<table>
<thead>
<tr>
<th>RPJMN</th>
<th>RPJMN</th>
<th>RPJMN</th>
<th>RPJMN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target</strong></td>
<td><strong>To develop Indonesia as a secure, prosperous, fair and democratic country with an improved public welfare.</strong></td>
<td><strong>To enhance the quality of human resources, develop information and technology, and strengthen economic competitiveness.</strong></td>
<td><strong>To distribute economic development with the bases of natural resources, high quality human resources, and information and technology.</strong></td>
</tr>
</tbody>
</table>


The Committee for the Acceleration of Priority Infrastructure Delivery (KPPIP) was reconstituted under Presidential Regulation No. 75/2014 to help implement national strategic and priority projects. Other than determining strategy and policy and facilitating the capacity and institutional building related to priority infrastructure delivery, the mandates of KPPIP include developing pre-feasibility study quality standards, determining priority projects, determining funding schemes and sources, and monitoring and debottlenecking the implementation of projects. The members of KPPIP are represented by the Minister of Economic Affairs (coordinating minister), Minister of Agrarian and Spatial Planning, Minister of Finance and Minister of National Development Planning (Bappenes). KPPIP has a full time Project Management Office that manages and delivers the strategic and priority infrastructure projects in the country. Along with providing knowledge sharing on project preparation and debottlenecking for the RPJNN projects, KPPIP monitors, evaluates and debottlenecks the National Strategic Projects. For Priority Projects, KPPIP is actively involved in the whole project life-cycle starting from project preparation, operations and maintenance.

The PPP Directorate of Indonesia under Bappenes is responsible for policies related to PPP in the country. The Directorate’s role is to develop cooperation between the government and private sector in the areas related to infrastructure under the arrangements of public-private partnerships (PPP). Among other things, the Directorate is responsible for assessing, implementing and monitoring the projects undertaken under PPP arrangements in a transparent and efficient manner. The ministry published a detailed document on the infrastructure projects that would be implemented under PPP.

PT Sarana Multi Infrastructure (PT SMI) was established as a state-owned enterprise (SEO) financial institution to provide advisory services, project development and long-term financing facilities. The funding sources include equity, loans and grants, bonds and securities and securitization. PT SMI’s capacity to assist infrastructure development was enhanced by its merger with the Indonesian Investment Center in 2017. The Availability Payment scheme was instituted by the Ministry of Finance (stipulated by Presidential Regulation no 38/2015 and Ministry of Finance Regulation no 190/PMK.08/2015) to support projects that are not commercially viable and have high demand risks to enable private participation.

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24 The information is taken from Utomo and Haryanto (2016).
25 https://library.pppknowledgehub.org/documents/37597#ref_site=kl
The Indonesian Infrastructure Guarantee Fund (IIGF) was established in 2009 to provide guarantees for Government Contracting Agencies to fulfill the contractual obligations of the Cooperation Agreement of PPP projects. The IIGF guarantee scheme improves the transparency and governance of the guarantee process and enhances the credit-worthiness and bankability of projects. The guarantee encourages private sector investments in infrastructure projects as it mitigates risks not covered in the market and has contract agreements that comply with a common standard. Beyond the guarantee provided by IIGF, the government also provides guarantees on certain PPP projects under Presidential Regulation No. 78/2010 on infrastructure Guarantee for Public Private Partnership.

4.1.4. Legal and Regulatory Framework for Infrastructure Investment

Being a civil law country, most of the initiatives related to infrastructure development and finance in Indonesia are governed by laws and regulations. The legal and regulatory framework for infrastructure investment consists of acts and presidential decrees which become the basis for regulators, authorities and market players to internally regulate and apply infrastructure financing. Three broad categories of laws related to infrastructure financing can be identified. The first of these are laws and regulations relating to infrastructure related issues. Presidential Decree No. 3/2016 identifies the national strategic projects and identifies the processes of permits and licensing, government procurement, government guarantee, debottlenecking, spatial planning and land acquisition. Some other laws related to infrastructure are shown in Table 4.1.5.

Second are the regulations that govern PPP in the country. Presidential Regulation No. 38/2015 on the Cooperation between Government and Business Entities on the Procurement of Infrastructure outlines the regulatory framework for implementing PPPs in the country. The Minister of National Development Planning/Head of National Planning Agency Regulation No. 3/2012 on General Guidelines of Implementation of Cooperation between the Government and Business Entity in Infrastructure Provision outlines the operational guidelines for the implementation of PPP projects.

Table 4.1.5: Legal and Regulatory Framework for Infrastructure Investment

<table>
<thead>
<tr>
<th>No</th>
<th>Laws</th>
<th>Regulated Items</th>
<th>Infrastructure Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Act Number 25 Year 2004</td>
<td>National Economic Development System</td>
<td>Basis for National Infrastructure development</td>
</tr>
<tr>
<td>2.</td>
<td>Presidential Decree Number 2 Year 2015</td>
<td>National Medium Term Development Planning</td>
<td>Basis for Medium Term Infrastructure Planning</td>
</tr>
<tr>
<td>3.</td>
<td>Presidential Decree Number 122 Year 2016</td>
<td>Accelerating Prioritized Infrastructure Projects</td>
<td>Basis for Prioritizing Prioritized Projects</td>
</tr>
<tr>
<td>5.</td>
<td>Act Number 2 Year 2017</td>
<td>Accelerating Construction Projects</td>
<td>Basis for Accelerating Construction Projects</td>
</tr>
</tbody>
</table>

Source: Author’s own

27 Presidential Regulation No. 78 of 2010 on Government Guarantee for Cooperation Project between Government and Business Entity provided by Infrastructure Guarantor Company established the Indonesia Infrastructure Guarantee Fund (IIGF). The Ministry of Finance Regulation No. 260/2010 on Implementation Guidelines for Guarantee in Infrastructure under PPP Model provides further procedures of requesting the funds from IIGF.

28 The information is taken from Utomo and Haryanto (2016).

The third set of laws and regulations relate to specific, sector-wise regulations that were also instituted to create a conducive environment for infrastructure delivery. The laws and regulations specific to different sectors are listed in Table 4.1.6. Other than the regulations listed in the table, there are additional laws/regulations that govern the sectors. For example, Presidential Decree No. 4/2016 on electricity projects identifies the number of facilities provided for state-owned enterprise PT PLN to accelerate the provision of electricity. Some of the steps include strengthening the balance sheet of PLN and the provision of equity and lending by the government, tax holiday, etc.

### Table 4.1.6: Sector Specific Laws and Regulations

<table>
<thead>
<tr>
<th>Sector</th>
<th>Relevant Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airports</td>
<td>Law No. 1 of 2009 on Air Transportation</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 40/2012 on Airport Construction and Environment Preservation</td>
</tr>
<tr>
<td>Ports</td>
<td>Law No. 17 of 2008 on Water Transportation</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 61 of 2009 on Port Affairs</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 20 of 2010 Water Transportation</td>
</tr>
<tr>
<td>Railways</td>
<td>Law No. 23 of 2007 on Railway Affairs</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 56 of 2009 on Implementation of Railway Affairs</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 72 of 2009 on Rail Traffic and Transportation</td>
</tr>
<tr>
<td>Roads</td>
<td>Law No. 22 of 2009 on Traffic and Road Transportation</td>
</tr>
<tr>
<td>Electricity (Power Plant, Transmission, Distribution)</td>
<td>Law No. 30 of 2009 on Electricity</td>
</tr>
<tr>
<td></td>
<td>Law 27 of 2003 on Geothermal</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 59 of 2007 on Geothermal Business Activities</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 3 of 2005 on Amendment to Government Regulation No. 10 of 1989 on the Provision and Utilisation of Electricity</td>
</tr>
<tr>
<td></td>
<td>Law No. 30 of 2009 on Electricity</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 14 of 2012 on Electricity Business Provision</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No.62 of 2012 on Electricity Support Business</td>
</tr>
<tr>
<td></td>
<td>Ministry of Industry Regulation No. 54/M-Ind/PER/3/2012 on the Guidelines for the Use of Domestic Products in the Construction of Electricity Infrastructure</td>
</tr>
<tr>
<td>Water Treatment, Transmission and Distribution</td>
<td>Law No. 7 of 2004 on Water Resources</td>
</tr>
<tr>
<td></td>
<td>Government Regulation No. 16 of 2005 on Development of Drinking Water Supply</td>
</tr>
</tbody>
</table>


After the enactment of various acts and presidential decrees, the relevant ministries take the necessary steps to implement them. For example, the central government has imposed 511 project assignments on the Ministry of State Owned Enterprises (SOE) for them to pursue and implement infrastructure development.

While PPP was regulated by Presidential Regulation No. 67/2005, Indonesia has numerous laws, acts and regulations that govern other aspects of PPP. Furthermore, some of the procedures and requirements are regulated by government regulations on the management of state and regional assets and regional cooperation. Different layers of laws and regulations sometimes overlap and can, at times, be conflicting (ADB undated: 2). To have clarity in law related to PPP, there is a need for a comprehensive law that provides a clear legal framework to private investors willing to invest in infrastructure projects. In this regard, Public Private Partnership Presidential Regulation no 38/2015 revised the PPP regulations of 2005 to encourage more PPP investments in the infrastructure sector.
The statuses of the overall procurement regime identified in Chapter 2 for Indonesia relative to the countries in different income groupings and the East Asia Pacific (EA&P) Region are shown in Chart 4.1.6. The index shows that the current procurement regime for infrastructure projects in Indonesia has improved and is significantly better than the average of the EA&P region and similar to the averages of high-income countries. All the stages of Indonesia’s procurement regime are better than the averages of OIC member countries.

**Chart 4.1.6: Procurement Regime of PPPs: Indonesia (0-100 Highest)**

![Chart showing procurement regime stages for Indonesia compared to different income groups.](chart)

*Source: World Bank (2018f)*

IMF and World Bank (2017) identifies that the legal framework for special purpose vehicles (SPV) that is used for issuing securities needs to be strengthened. Since in common law countries trust can be used as a legal form for the SPV, Indonesia being a civil law country needs to develop an appropriate legal framework for establishing SPVs.

**4.1.4.1. Legal Environment for Islamic Finance**

Banking Act Number 7, 1992 enabled the implementation of conventional and Islamic banking systems by recognizing the special features of Islamic banking. Act Number 10, 1998 further allowed conventional banks to establish Islamic banking units (UUS) and the conversion of conventional banks to Islamic banks. The Islamic Banking Act Number 21, 2008 further strengthened the legal framework of Islamic banking and provided a comprehensive legal basis to promote the growth of Islamic banking. Insurance Act Number 40 2014 governs the entire insurance industry in Indonesia and governs both the conventional insurance and takaful sectors. Sukuk Act Number 19, 2008 provides the legal foundations for issuing sukuk in the country.

In order to increase the roles of Islamic finance in infrastructure financing, some policies have been agreed to be pursued by three authorities, namely Bank Indonesia as the Islamic money
market authority, the Ministry of Finance as the government Sukuk authority, and the Financial Services Authority (OJK) as the Islamic capital market (particularly corporate Sukuk) and Islamic banks authority. The policies are compiled in the National Strategies to Deepen the Islamic Financial Market (SN-PPK) to finance infrastructure projects and are briefly discussed below.

Developing, strengthening and expanding instruments, transaction mechanisms and market infrastructures: Bank Indonesia and OJK have expanded the Islamic financial market instruments to finance and to support infrastructure projects. OJK supports bank financing for infrastructure by encouraging SOE to issue corporate Sukuk to finance infrastructure projects. OJK Regulation Number 18/POJK.04/2015 on issuing and offering corporate Sukuk, later amended by OJK Regulation Number 3/POJK.04/2018, eases requirements for public companies to offer and issue corporate Sukuk. PJK Regulation Number 20/POJK.04/2015 of OJK provides the rules for the variety of Islamic securities issuances including the requirement for Islamic securities that are based on Islamic assets.

Furthermore, in order to support infrastructure financing through government Sukuk (SBSN), the Ministry of Finance has also applied the Ministry of Finance Regulations (PMK) Number 16/PMK.08/2015 on buyback and the switching of SBSN to deepen the Sukuk market. With such a PMK, (i) the government might buyback (cash buy back) SBSN and ease liquidity problems in banks or (ii) SBSN holders may switch their SBSN with the other series. The Ministry of Finance has also issued various series of Project Based Sukuk (PBS) to finance government projects including infrastructure. Bank Indonesia regulations (PBI) Number 20/9/PBI/2018 deal with the Islamic Negotiable Certificate of Deposit (Islamic NCD) issued by Islamic banks as the money market instrument to finance short term infrastructure projects.

Improving and raising investor confidence as well as the number of potential issuers: The Ministry of Finance, supported by Bank Indonesia and OJK have applied some policies to increase investor confidence in the Islamic financial market, especially in the financing of infrastructure projects and to attract potential issuers to issue Sukuk. Some of the initiatives include developing online government securities and distribution channels to facilitate transactions; facilitating and assisting municipal sukuk issuances to finance regional projects; providing opportunities to issue sukuk-linked waqf and cash waqf-linked Sukuk; developing and optimizing the Electronic Trading Platform (ETP); harmonizing tax treatment among financial market regulators; and attracting potential investors such as the Indonesian Pilgrimage Management Body (BPKH) since it manages more than IDR 100 trillion (USD 71 billion) in hajj funds that is available to be invested in government securities for infrastructure financing. The policies are now being implemented by the three authorities (Bank Indonesia, Ministry of Finance and OJK) and supported by other related bodies and market players such as the National Sharia Board (DSN), Indonesian Deposit Insurance Corporation (LPS), BPKH, and the Indonesian Ministry of National Development Planning (Bappenas).

4.1.5. Roles of Islamic Finance in Infrastructure Financing

As shown above, while a significant part of the funding for infrastructure comes from the government budget and the Ministry of Public Works implements the projects, infrastructure such as airport, water and electricity, and roads are commonly developed and maintained by state-owned enterprises (SOE). The remaining infrastructure can be financed by the private
sector under PPP arrangements. The government, SOE, and the private sector have the opportunity to raise funds from Islamic finance for investing in infrastructure.

Chart 4.1.7 shows the percentage of the financing that comes from different segments of the government and the private corporate sectors for the financing of infrastructure projects. Banks cover 74% (IDR 1296 trillion or USD 92.6 billion) of the total corporate financing, followed by nonbanks with 23% (IDR 403 trillion or USD 28.78 billion) and other types of financing with 3% (IDR 52.56 trillion or USD3.75 billion). Corporate Sukuk takes an even smaller share which is only 4% of the total corporate securities. This is partly due to a limited understanding of sukuk among corporations, no tax incentive for issuing corporate sukuk, and the overall less developed sukuk market compared to its conventional counterpart.

**Chart 4.1.7: Composition of Financing in the National Infrastructure Finance**

The financing of Islamic banks to different infrastructure sectors is shown in Table 4.1.7. The overall contribution of Islamic banks in infrastructure sector is 8.4% with 2.8% going to the electricity sector and 2.5% going to the transportation sector.

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30 Exchange rate on 31 March was USD1=DR 13730.
Table 4.1. 7: Islamic Banks Assets Composition and Financing of Infrastructure Sector (2018: Q1) (IDR billion)

<table>
<thead>
<tr>
<th>Total Islamic Banking Assets Asset Composition</th>
<th>IDR (Billion)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Shariah-compliant financing (excluding interbank financing)</td>
<td>190,063.6</td>
<td>64.6%</td>
</tr>
<tr>
<td>Sukūk holdings</td>
<td>26,452.6</td>
<td>9.0%</td>
</tr>
<tr>
<td>Other Shari’ah-compliant securities</td>
<td>3,879.4</td>
<td>1.3%</td>
</tr>
<tr>
<td>Interbank financing</td>
<td>5,784.7</td>
<td>2.0%</td>
</tr>
<tr>
<td>All other assets</td>
<td>68,087.1</td>
<td>23.1%</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>294,267.4</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Infrastructure Financing by Islamic Banks</th>
<th>IDR (Billion)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financing going to infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity, gas, steam and air-conditioning supply</td>
<td>8,162.5</td>
<td>2.8%</td>
</tr>
<tr>
<td>Water supply, sewerage, and waste management</td>
<td>439.9</td>
<td>0.1%</td>
</tr>
<tr>
<td>Transportation and storage</td>
<td>7,372.2</td>
<td>2.5%</td>
</tr>
<tr>
<td>Information and communication</td>
<td>1,045.0</td>
<td>0.4%</td>
</tr>
<tr>
<td>Education</td>
<td>4,069.8</td>
<td>1.4%</td>
</tr>
<tr>
<td>Human health and social work activities</td>
<td>3,574.4</td>
<td>1.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24,663.8</strong></td>
<td><strong>8.4%</strong></td>
</tr>
</tbody>
</table>

*Source: IFSB PSIFI.*

Chart 4.1. 8: Types and Annual Issuance Values of SBSN (IDR trillion)

As indicated in Chart 4.1.5, the total financial needs for infrastructure financing over the 2015-2019 period is USD 342.57 billion, out of which the government plans to finance around 41%, SEOs are estimated to finance 22%, and the remaining 37% is projected to be raised by the private sector. The government finances a significant part of the projects by issuing government securities, both bonds and sukuk. Government bonds dominate at IDR 1701 trillion (USD 121.5 billion) and this is followed by government sukuk (commonly called SBSN) with IDR 277 trillion (USD19.78 billion) which is 14% of the total government securities.
Government sukuk or SBSN takes various forms such as the Islamic fixed rate Sukuk (IFR), Retail Sukuk (SR), Green Sukuk, Project Based Sukuk (PBS), Indonesian National Sukuk (SNI), etc. All types of SBSN are for infrastructure financing, especially PBS which is issued in a longer tenor than the others. SBSN is also issued for specific purposes and targets. For example, SDHI utilizes pilgrimage funds (amounted to more than IDR 100 trillion or USD 71 billion) to finance government projects; SNI is used to tap international markets since it is a dollar-denominated Sukuk; and SR and ST target retail investors. The distribution of issuances of different types of government sukuk during 2013-2017 is shown in Chart 4.1.8. The table shows that Project Based Sukuk (PBS) has the largest issue and the government has increased the issuance of this sukuk over the years.

The Ministry of Public Works has offered Islamic finance schemes through infrastructure sukuk to finance public works infrastructure projects. In total, the Ministry of Finance has issued IDR 16.7 trillion (USD 11.9 billion) SBSN to finance 590 national infrastructure projects in 2017. As such, Islamic finance has had some contribution in developing national infrastructure projects. Furthermore, 40% of the IDR 16.3 trillion (USD11.6 billion) financing of the National Electricity Company (PLN), one of the major SOE companies, is realised with funds raised by sukuk.

Besides government sukuk (SBSN), corporate sukuk contributes to project financing. From the period of 2013 to 2017, the total outstanding value of corporate Sukuk was IDR 17.5 trillion (USD 12.5 billion), with an average annual growth rate of 20.1%. Up to the end of 2017, there were 213 individual investors invested in corporate sukuk (through mutual fund companies) followed by pension funds and insurance companies.

The Islamic money market assists market players and investors in terms of liquidity management. Islamic money market instruments are classified as instruments between banks and the central bank and among banks. For the former, there are Bank Indonesia Islamic Certificate (SBIS), Repo SBIS, Repo SBSN and Islamic Foreign Exchange Term Deposit. In the latter type, two active instruments exist, namely the Interbank Mudarabah Certificate (SIMA) and Islamic repo. In fact, if an Islamic bank needs urgent liquidity, it tends to firstly borrow from the parent (conventional) bank. Secondly, it may use both repo SBIS and repo SBSN with the central bank. In relation to infrastructure financing, Islamic money market enhances liquidity management among Islamic financial institutions in financing infrastructure projects. For example: (i) Repo SBSN might help SBSN holders (banks, non banks) gain short term liquidity through repo transactions and avoid liquidity risks; and (ii) short term SBSN (namely SPN-S), which is for short-term infrastructure project development, might be liquid in the secondary market and attract more investors to get into this instrument.

The social sector in Indonesia is active in Indonesia with several new schemes. Some of the new initiatives use the innovative ideas of using the instruments of zakat and waqf to provide social infrastructure services. The case studies illustrate a few examples.
4.1.6.2. Case Studies

Case Study: Cash Waqf Linked Sukuk (CWLS)

CWLS is a recent development of Sukuk initiated by the National Waqf Body (BWI), Ministry of Finance (MoF), Ministry of Religion (MoR) and Bank Indonesia (BI) in collaboration with the Productive Waqf Forum (FWP). Islamic banks, and social institutions (Ministry of Finance, Bank Indonesia, Financial Service Authority, 2018). CWLS was officially launched during the IMF/World Bank Annual Meeting 2018 in Bali as a unique instrument since it combines the Islamic social instrument (waqf) with the sukuk market (SBSN) to take part in government public projects such as government schools, public hospitals, mosques, etc.

Chart 4.1. 9: The Structure of Cash Waqf Linked Sukuk (CWLS)

Technically, the CWLS model involves the FWP, BWI, Ministry of Finance (MoF), Ministry of Religion, social institutions and Islamic Banks as in the following:

1. FWP collects cash waqf (temporary) from Waqif (social investors) and extends it to the National Waqf Body (BWI) via Islamic banks.
2. BWI (as Nadhizir or Waqf manager) places the cash waqf in SBSN (waqf contract) with a private placement mechanism for a temporary period (5 years).
3. The government (Ministry of Finance) uses the cash waqf funds to finance government social projects such as schools, hospitals, etc.
4. The government (for an appreciation) pays regular coupon to BWI via Islamic banks.
5. The Coupon (return from waqf investment and treated as another waqf fund) is to be used by social institutions for other social purposes.
6. In the maturity date (6a), the MoF returns the principal of SBSN (waqf contract) to BWI and then it is extended to FWP (6b).
7. Bank Indonesia, BWI and the Ministry of Religion (MoR) monitor, evaluate and value the implementation of projects and CWLS.
CWLS was launched on November 1st, 2018 during the celebration of the 10 year anniversary of SBSN via the signing of the CWLS memorandum of understanding between Bank Indonesia, the Ministry of Finance, the Ministry of Religion and the BWI. Fortunately, within only one week prior to such a launching event in November 2018, BWI and FWP successfully collected IDR 21.2 billion (USD1.5 million) cash waqf for CWLS. Once CWLS is formally launched, MoF will start using cash waqf funds to finance the government’s social projects in (amongst others) Palu and Lombok.

**Case Study: UNDP and BAZNAS**

A novel initiative taken by UNDP and BAZNAS (the National Zakat Collection Agency) in Indonesia is to use zakat funds to provide electricity to deprived households living in remote rural villages in Jambi in Sumatra. With the aim of achieving SDGs (No Poverty and Affordable and Clean Energy), BAZNAS channeled USD 350,000 in zakat funds for the generation of micro-hydro energy in a cost-sharing partnership with UNDP-Global Environment Facility project and the state-owned Bank Jambi. Inaugurated in April 2018 with the involvement of New and Renewable Energy and Energy Conservation, Ministry of Energy and Mineral Resources, and the provincial government of Jambi, the micro-hydro power plants (PLTMH) were operational in August 2018. Once operational, four PLTMH produced a total of 180kw of electricity that would be able to provide power to 803 households, 7 schools, 4 mosques, 19 mushala (prayer rooms), one Islamic boarding school, and other village infrastructure.  

**Chart 4.1. 10: Number of Projects and Financing from IDB: Indonesia (USD million)**

![Chart](https://isdbdata.github.io/monograph2017.html)


31 See UN and Dag Hammar Skjold Foundation (undated) and UNDP (2018).
4.1.5.3. International Sources

International sources of Islamic finance come from IDB. Chart 4.1.10 shows that during 1976-2016 Indonesia received total financing of USD 2.952 billion from IDB. From 2016 onwards an additional 6 projects worth USD 836.3 were financed in the country.

4.1.6. Conclusion and Recommendations

The government and financial market regulators have had national programs, namely RPJMN, to accelerate infrastructure projects. Special acts and presidential decrees on fostering infrastructure financing have been determined and applied to ministries and financial market regulators (Bank Indonesia, Financial Services Authority and Ministry of Finance) to collaboratively support infrastructure development. Indonesia has established a special institution, PT SMI, to provide long-term financing and advisory services related to infrastructure projects. Furthermore, the Indonesian Infrastructure Guarantee Fund is a unique institution that provides guarantees on fulfilling the contractual obligations of PPP by the government to encourage the participation of the private sector.

Indonesia is one of the few countries in which the sukuk sector is larger than the Islamic banking sector. The Islamic banking sector which constitutes only 5.5% of the overall banking sector has invested 8.4% of its assets in the infrastructure sector. The capital markets in general and sukuk market have played a more dominant role in raising funds for the infrastructure sector in Indonesia. The government has issued various types of sukuk which have helped the growth of the sukuk market. While some of the sovereign sukuk are general in nature, whereby funds are raised to cover budgetary expenses, some sukuk are project-specific.

Furthermore, Indonesia has also issued retail sukuk that have expanded the investor base on the one hand and provided retail investors opportunities to invest in alternative Shariah compliant asset classes. The dominant role of the government for infrastructure financing is also helping the development of the sukuk market and further attracts other Islamic investors to invest in the government or corporate sukuk. Thus, by purchasing the sukuk, many financial institutions including Islamic banks provide funds indirectly in infrastructure projects.

Indonesia has also initiated pioneering initiatives in using the social sector to provide social infrastructure services. Using zakat and waqf funds for social infrastructure sectors not only enables the provision of social infrastructure services to the deprived segments of the population, it would also free up resources for the government to support other public infrastructure such as transportation.

Given the above, Table 4.1.8 identifies the issues and presents the recommendations to further enhance the role of Islamic finance in infrastructure development in Indonesia.
Table 4.1.8: Issues and Policy Recommendations: Indonesia

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure Related Strategies and Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• PPP projects and contracts are novel and complex.</td>
<td>• Developing Shariah-compliant contract templates that can be used for different types of PPP projects.</td>
<td>• Relevant ministry in coordination with IDBG</td>
</tr>
<tr>
<td>• Indonesia is one of the few countries that has guarantees for implementation of PPP contracts.</td>
<td>• Expand the scope of guarantees and insurances to cover other risks such as political risks and partial credit risks in a Shariah-compliant manner.</td>
<td>• Relevant public bodies • Private sector insurance/takaful companies</td>
</tr>
<tr>
<td><strong>Legal and Regulatory Regimes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• While Indonesia has Islamic banking and capital markets/sukuk law, the takaful industry operates under single insurance law.</td>
<td>• Introduce specific takaful law to help promote the industry further.</td>
<td>• Relevant government ministry</td>
</tr>
<tr>
<td>• The regulatory framework for capital requirements discourages banks from investing in long-term projects as these would require higher capital charges.</td>
<td>• Balance between financial stability objectives and lowering the capital requirements for investments in long-term projects to encourage more involvement of Islamic banks in infrastructure financing.</td>
<td>• Banking regulatory bodies (OJK and Bank Indonesia)</td>
</tr>
<tr>
<td>• Since Islamic banks are relatively small, their contribution to infrastructure development can be enhanced by jointly funding the projects with other banks through syndicated financing.</td>
<td>• Develop a sound legal framework and contracts for syndication to increase the participation of Islamic banks in infrastructure projects along with other banks</td>
<td>• Relevant government ministry</td>
</tr>
<tr>
<td><strong>Government and Public Bodies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Government-linked financial institution PT SMI provides financing for infrastructure projects</td>
<td>• Strengthen PT SMI to further encourage pooling of funds from different sources for investments in infrastructure projects in a Shariah-compliant manner. • PT SMI can also provide information and advisory services on Islamic project financing and the potential infrastructure projects that other financial institutions can invest in.</td>
<td>• Board and Senior management of PT SMI</td>
</tr>
<tr>
<td><strong>Islamic Financial Institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• One key factor that limits the involvement of Islamic banks in long-term infrastructure projects is liquidity risks arising from their short-term and liquid liabilities.</td>
<td>• Separate deposits and (restricted) investment accounts in Islamic banks. Since the investors in the latter are expected to have long-term perspectives and also bear the risks of the investments, Islamic banks would be able to use these funds for investment in the infrastructure sector and will not be required to hold much capital for investment.</td>
<td>• Relevant ministry and regulators • Islamic banks</td>
</tr>
<tr>
<td>• One way in which liquidity risk of Islamic banks (that can arise</td>
<td>• Improve the efficiency and depth of Islamic money markets to create</td>
<td>• Central bank • Other stakeholders such</td>
</tr>
</tbody>
</table>
Infrastructure Financing through Islamic Finance in the Islamic Countries

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to investments in long-term projects) can be mitigated is to develop a well-functioning Islamic money market through which Islamic banks can access liquidity when needed.</td>
<td>Incentives for Islamic banks to invest in long-term illiquid assets.</td>
<td>Islamic financial institutions</td>
</tr>
<tr>
<td>The balance sheet structure of life insurance and pension funds supports investment in long-term investments. However, the Islamic nonbank financial institutions sector in Indonesia are relatively small.</td>
<td>Increase the shares of family takaful and Islamic pension funds to increase the role of Islamic finance in the infrastructure sector.</td>
<td>Relevant ministries to create the right legal and regulatory framework</td>
</tr>
<tr>
<td>• Increase the shares of family takaful and Islamic pension funds to increase the role of Islamic finance in the infrastructure sector.</td>
<td>Establish specialized Islamic funds and platforms to increase investments in infrastructure projects.</td>
<td>Market players</td>
</tr>
<tr>
<td>Islamic Capital Markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Although Indonesia has used sukuk to raise funds for the infrastructure sector, there is potential to expand it further.</td>
<td>Develop market and infrastructure for Islamic capital market/sukuk.</td>
<td>Capital markets authority</td>
</tr>
<tr>
<td>• Sukuk structures are complex and new for many stakeholders.</td>
<td>Issue more project sukuk.</td>
<td>Issuers (sovereign and corporates)</td>
</tr>
<tr>
<td>• Indonesia has issued retail sukuk to tap into alternative sources of funds which can be further increased.</td>
<td>Establish an institution that can advise on the issuance of sukuk and develop templates for the issuance of sukuk for infrastructure projects.</td>
<td>The government linked financial institution PT SMI that also has a Shariah unit</td>
</tr>
<tr>
<td>• Increase literacy of Islamic finance and introduce efficient mechanisms for the delivery and redemption of sukuk issues to further encourage retail investors to invest in infrastructure sector</td>
<td>Increase literacy of Islamic finance and introduce efficient mechanisms for the delivery and redemption of sukuk issues to further encourage retail investors to invest in infrastructure sector</td>
<td>Capital markets authority Issuers (sovereign and corporate) Financial institutions</td>
</tr>
</tbody>
</table>
4.2. Malaysia

4.2.1. Malaysian Financial Sector and Islamic Finance: An Overview

After the Asian financial crisis of the late 1990s in which the Malaysian financial sector and the economy were affected adversely, the government of Malaysia made a decision to strengthen the domestic financial industry to make it more resilient and be able to meet the needs of its growing economy in a changing and competitive global world. Bank Negara Malaysia (BNM), the central bank and regulator of the banking and insurance sectors, launched the Financial Sector Masterplan 2001-2010\(^32\) to strengthen the banks, insurance/takaful companies and development financial institutions. The goals of the plan were to provide a supportive legal and regulatory framework and institutional environment for a strong, innovative and diversified domestic financial sector that is able to promote a growing and dynamic real economy efficiently and effectively (BNM 2001). With the expiry of the Masterplan in 2010, BNM launched the Financial Sector Blueprint 2011-2020\(^33\) to further bolster the financial sector by making it progressive and dynamic to help advance the country’s vision of becoming a high value-added and high-income country.

Similar initiatives were taken by the Securities Commission Malaysia (SCM) that regulates the capital markets. A 10-year Capital Market Masterplan was published in 2001 to strengthen different aspects of the Malaysian capital markets. The aim of the Masterplan was to develop the 'Malaysian capital market as internally competitive in all core areas necessary to support the country's basic capital and investment needs, as well as its longer-term economic objectives.' (SCM 2001: 13). Subsequently, SCM issued the Capital Market Masterplan 2 in 2011 to further increase the capacity and efficiency of the Malaysian capital market to meet the financing requirements of economic growth. The objectives of the plan included providing the regulatory framework that can promote, among others, capital formation from start-ups to large-scale projects, enhancing retail participation in the capital markets, and deepening secondary market liquidity (SCM 2011).

Due to the steps taken by the regulatory bodies, the financial sectors in Malaysia developed in a robust manner. Chart 4.2.1 shows that the status of the overall Financial Development Index of Malaysia (0.66) is higher compared to the averages of both OIC member countries (0.23) and countries belonging to the Asia Pacific region (APR) (0.36). The index values of both the financial institutions (0.71) and financial markets (0.60) for Malaysia are also significantly higher than those of the OIC (0.13 and 0.26) and APR (0.33 and 0.46) respectively.


Chart 4.2.1: Relative Financial Sector Development in Malaysia (2016) (0-1 Highest)


Chart 4.2.2 shows the composition of the Malaysian financial industry according to broad categories of banking, insurance and capital markets. The capital markets sector that includes the stock market and the bonds/sukuk market is the largest with a total value of RM 3.199 trillion followed by the banking sector with assets valued at RM 2.766 trillion and the insurance/takaful sectors with assets worth RM 290 billion. The components of the capital market show a larger stock market segment with a market capitalisation at RM 1.906 trillion and bonds and sukuk market valued at RM 1.291 trillion.

Chart 4.2.2: Composition of the Financial Sector: Malaysia 2017 (RM billion)

Source: Estimated from BNM (2017) and SCM (2017)

The financial institutions in Malaysia are diverse and include commercial banks, investment banks, development financial institutions (DFIs) and other nonbank financial institutions such as cooperatives, building societies, leasing and factoring companies and other DFIs (BNM 2017). While six DFIs are established under the Development Financial Institutions Act 2002 and are regulated by BNM, seven other DFIs are not under the purview of the Act or BNM. The former DFIs include specialised banks such as SME Bank, EXIM Bank and Agro Bank and the latter group includes the Malaysian Industrial Development Bank, Credit Guarantee
Corporation Berhad and Lembaga Tabung Haji. The relative size of different types of financial institutions along with the oversight bodies responsible for regulating them are shown in Table 4.2.1.

Table 4.2.1: Financial Institutions Types and Oversight Authorities (2017)

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Percentage of Assets</th>
<th>Oversight Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks, insurance and takaful operators and DFIs(^a)</td>
<td>59.9%</td>
<td>Bank Negara Malaysia (BNM)</td>
</tr>
<tr>
<td>Provident and pension finds</td>
<td>18.9%</td>
<td>Government Ministries</td>
</tr>
<tr>
<td>Other DFIs(^b)</td>
<td>1.8%</td>
<td>Government Ministries</td>
</tr>
<tr>
<td>Cooperatives</td>
<td>0.5%</td>
<td>Malaysia Cooperatives Societies Commission</td>
</tr>
<tr>
<td>Fund management industry</td>
<td>14.4%</td>
<td>Securities Commission Malaysia</td>
</tr>
<tr>
<td>Securitization vehicles</td>
<td>1.1%</td>
<td>Securities Commission Malaysia</td>
</tr>
<tr>
<td>Leasing and factoring companies</td>
<td>0.5%</td>
<td>No oversight authorities</td>
</tr>
<tr>
<td>Building society</td>
<td>0.9%</td>
<td>No oversight authorities</td>
</tr>
<tr>
<td>Others(^c)</td>
<td>2.1%</td>
<td>Government Ministries</td>
</tr>
</tbody>
</table>

\(^a\)-Regulated by the Development Financial Institutions Act 2002 (DFIA 2002);
\(^b\)-Not regulated by DFIA 2002.
\(^c\)-These include pawn brokers, money lenders, non-bank education finance providers and hire-purchases, government owned trustee companies, etc.


4.2.1.1. Islamic Financial Industry

The Islamic financial industry in Malaysia is ranked the most developed globally according to the Islamic Finance Development Indicator developed by ICD and Thomson Reuters (2017). Ranking top in the quantitative development indicator, Malaysia ranks third in terms of Islamic finance assets valued at USD 405.985 billion in 2016.\(^{34}\) Chart 4.2.3 shows the size and composition of the Islamic financial sector in Malaysia. The Islamic capital market is the dominant sector with a valuation of RM 1.893 trillion constituting 59.2% of the national capital markets sector. The Islamic banking assets worth RM 829.81 billion form 30% of the overall banking sector assets and the takaful sector is the smallest both in terms of size (RM 29.289 billion) and share of the sector (10.1%).

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\(^{34}\)The countries with the highest Islamic financial assets are Iran (USD 545.377 billion) followed by Saudi Arabia (USD 472,654) (ICD and TR 2017: 29).
The size and share of different Islamic capital market segments in Malaysia are shown in Chart 4.2.4. While the market capitalization of Islamic stocks is RM 1.133 trillion constituting 59.5% of the domestic stock market, the value of the total sukuk outstanding is RM 759.64 billion, representing close to 59% of the overall bonds/sukuk markets.

The assets and wealth management segments of the Islamic financial industry and their relative sizes are presented in Chart 4.2.5. The value of Islamic assets under management (AUM) in Malaysia is RM 172.16 billion, constituting 22.2% of the overall AUM. While the Islamic unit trust funds form the bulk (RM 77.78 billion) of the Islamic AUM, it constitutes a relatively small proportion (18.2%) of the overall unit trust funds managed. The size of Islamic
private retirement scheme funds (RM 720 million) and Islamic ETFs (470 million) are relatively small, but these represent 32.3% and 24.2% of the overall funds respectively, indicating the overall small size of these fund segments.

**Chart 4.2.5: Islamic Asset/Wealth Management Segments (2017) (RM billion)**

![Chart showing the distribution of Islamic asset/wealth management segments](image)

Source: SCM (2017)

### 4.2.2. Current Status and Projected Investments in Infrastructure Sectors

Malaysia has relatively good infrastructure compared to its peers in both the OIC and the East Asia and Pacific (EAP) region. Chart 4.2.6 shows that not only is the overall index of infrastructure of Malaysia better (5.5) than the averages of the OIC (3.6) and EAP region (4.9). The quality of the infrastructure is also ranked higher than the two country groupings. The average index of the two infrastructure segments related to transportation and electricity and telephony are also higher than the averages of the two country groupings.

**Chart 4.2.6: Relative Status of Infrastructure in Malaysia (2017) (1-7 Best)**

![Chart showing the relative status of infrastructure](image)

Source: WEF (2018), The Global Competitiveness Index Historical Dataset
Malaysia ranks fifth among 41 countries in the Infrastructure Investment Index that measures the attractiveness of infrastructure investments for investors as reported by ARCADIS (2016). Given the high ranking, the private sector has played an important role in the development of the infrastructure sector of the country. The total investment in the infrastructure provided by the private sector in Malaysia is shown in Chart 4.2.7. During the 2005-2010 period, the infrastructure investments from the private sector amounted to a total of USD 8.477 billion (or USD 1.412 billion per year on the average). Most of the investments were made in the telecommunications sector (USD 4.239 billion), followed by the transport (USD 2.219 billion) and energy sector (USD 2.018 billion). During 2011-2016 the private sector invested USD 10.362 billion in infrastructure (or USD 1.727 billion per year), with most of it going into the energy sector (USD 6.293 billion) followed by the telecommunications sector (USD 3.687 billion) and transport sector (USD 381 million).

**Chart 4.2.7: Private Sector Investment in Infrastructure: Malaysia (USD million)**

Table 4.2.2 shows the current trends and the investment needs of infrastructure for 2016-2040 for Malaysia. The table shows that in the next 25 years Malaysia is expected to have a short-fall of USD 77 billion in infrastructure financing (or USD 3.08 billion per year), the bulk of which (USD 70 billion) will be needed to build roads and USD 6 billion for ports. The annual gap represents 0.96% of the GNI of 2015. It should be noted that the gaps identified in Table 4.2 represent additional funding needs that are beyond the current levels of investment. While this gap can be partly filled by the government, the private sector also has an important role to play to provide funding.

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35 Global Infrastructure Outlook, A G20 Initiative, provides information on the infrastructure needs and gaps in 56 countries. See https://outlook.gihub.org/
36 The gross national income of Malaysia was USD 320.5 billion in 2015 (World Bank 2017d:12)
Table 4.2.2: Infrastructure Needs and Gaps Malaysia 2016-2040 (USD Billion 2015 prices & exchange rates)

<table>
<thead>
<tr>
<th></th>
<th>Road</th>
<th>Rail</th>
<th>Airports</th>
<th>Ports</th>
<th>Telecoms</th>
<th>Electricity</th>
<th>Water</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current trends (CT)</td>
<td>104</td>
<td>28</td>
<td>2</td>
<td>5</td>
<td>27</td>
<td>179</td>
<td>39</td>
<td>383</td>
</tr>
<tr>
<td>Investment need (IN)</td>
<td>174</td>
<td>28</td>
<td>2</td>
<td>11</td>
<td>27</td>
<td>179</td>
<td>39</td>
<td>460</td>
</tr>
<tr>
<td>Gap between IN and CT</td>
<td>70</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: Global Infrastructure Outlook, https://outlook.gihub.org/countries/Malaysia

4.2.3. National Level Policies and Framework of Infrastructure Development

Issues related to infrastructure planning and development in Malaysia appear in various strategic and policy documents. At the very broad level, the role of infrastructure was recognised in the long-term strategic document, Vision 2020, which was launched by the then Prime Minister in 1991 to make Malaysia a high-income, fully developed nation economically, politically, socially, spiritually, psychologically and culturally (Mohamad 1991). The Vision document identified the role of infrastructure development as a means to achieve overall development (p. 16), narrow income gaps (p. 6), smooth the functioning of the economy (p.11), support small and medium enterprises (p. 15), and support the development of technological capabilities (p. 19). The document recognised the huge investments that would be needed and the possible bottlenecks that could arise in developing the necessary infrastructure projects.

While Vision 2020 provides a longer term perspective, the medium term planning for infrastructure comes in the form of ten-year policy documents and five-year Malaysia Plans. Coinciding with the launching of Vision 2020, the National Development Policy 1991-2000 was initiated, followed by the National Vision Policy 2001-2010. Starting with the First Malaysia Plan 1956-1960, the country is currently implementing the Eleventh Malaysia Plan 2016-2020. Each Malaysia Plan covers various developmental issues giving high priority to infrastructure investments. The Economic Planning Unit (EPU) under the Prime Minister's Office develops these plans in coordination with other public agencies (Lee and Chew-Ging 2017).

During the Tenth Malaysia Plan 2011-2015, the government made large investments in various infrastructure sectors such as the transport, energy and digital sectors. Recognizing that an efficient infrastructure reduces the cost of doing business and can improve productivity and competitiveness, the Eleventh Malaysia Plan 2016-2020 envisages further investments in the sector to support economic expansion. The focus areas of the Eleventh Malaysia Plan 2016-2020 include the following: building an integrated need-based transport system; improving the coverage, quality, and affordability of digital infrastructure; unleashing the growth of logistics and enhancing trade facilitation; encouraging sustainable energy use to support growth; and continuing the transition to a new water services industry framework (EPU 2018). Finally, in the short term, the infrastructure projects are implemented through the allocation of funds in annual national budgets.

A key feature of developing the infrastructure projects in Malaysia is to involve the private sector in infrastructure development through public-private partnerships (Yong 2017). To enable the participation of the private sector in infrastructure, the Malaysian Incorporated Policy was launched in 1983 and the Privatization Special Task Force was established under the Economic Planning Unit (EPU), Prime Minister's Department to implement the policy. With
the importance given to public-private partnerships (PPP) in the development process, a Privatization Master Plan was initiated in 1991 and a Private Finance Initiative was introduced in the Ninth Malaysia Plan 2006-2011. To deal with the enhanced role, a PPP Unit (Unit Kerjasama Awan Swasta or UKAS) was established under the Prime Minister’s Department in 2009. The PPP Unit acts as the central organ for planning, facilitating and coordinating PPP projects in the country (Hamsa 2014). To further encourage private participation, the Tenth Malaysia Plan (2011-2015) allocated an RM 20 billion Facilitation Fund to bridge the viability gap in private sector investments in infrastructure projects that have high strategic and developmental impacts.37

4.2.4. Legal and Regulatory Framework for Infrastructure Investments

The Land Acquisition Act 1960 (amended in 1991) provides the broader conditions under which the state can acquire land for infrastructure projects in Malaysia. While there are no specific laws governing private sector involvement in the infrastructure sector in the country, the relevant government bodies have issued several Guidelines that deal with different aspects of private sector involvements and the financing of infrastructure projects. The Privatisation Guidelines issued in 1985 provide a framework of policies governing privatisation and implementation mechanisms.38 The Public Private Partnership (PPP) Guideline was issued in 2009 by the Public Private Partnership Unit, Prime Minister’s Office to facilitate the Private Finance Initiative Programme that was a part of the Ninth Malaysia Plan. The Guideline distinguishes between PPP and privatisation and provides the key principles on how infrastructure projects are procured and implemented under the former. The Guidelines for Integrity Pact Implementation in Government Procurement was issued by the Ministry of Finance in 2010 and covered different stages of government procurement processes to enhance transparency and mitigate corrupt practices. The Facilitation Fund Guidelines were issued in 2011 for the RM 20 billion fund that was created under the Tenth Malaysia Plan.

At the operational level, various Commissions were established to deal with the specific sectors. For example, the Energy Commission (Suruhanjaya Tenaga) was established with the enactment of the Energy Commission Act 2001 to regulate the energy (electricity and gas) sector.39 While the Land Public Transport Commission (SPAD) was established in 2011 with the objective of developing public transport policies, plans and regulations related to land public transportation,40 the Malaysia Aviation Commission was established in 2016 to regulate commercial and economic matters related to civil aviation.41 Similarly, the Malaysian Communications and Multimedia Commission was established under the Communications and Multimedia Act (1998) to establish Malaysia as a global hub for communications and multimedia content and information services by instituting a national infrastructure that would provide affordable and equitable services.42

40 http://www.spad.gov.my/about-spad/overview
41 https://www.mavcom.my/en/home/
42 https://www.mcmc.gov.my/about-us/history
As discussed in Chapter 2, the World Bank identifies three stages of procurement regimes. Chart 4.2.8 shows the status of the procurement regime for PPPs in Malaysia in terms of preparation, procurement and contract management relative to different income groupings in the East Asia & Pacific region. While the status of the preparation stage for PPPs is relatively good in Malaysia with a score of 50 which is higher than all country groupings except high income countries, the procurement and contract management of PPPs achieves relatively low scores of 42 and 33 respectively. The chart shows that while Malaysia’s score for the preparation stage is better than the average OIC members, the procurement and contract management scores are lower.

**Chart 4.2.8: Procurement Regime of PPPs: Malaysia (1-100 Highest)**

![Chart showing the status of procurement regime in Malaysia and other regions](chart.png)

Source: WB (2018f).

**4.2.4.1. Laws and Regulation Supporting Islamic Finance**

The Malaysian government has been very supportive of the Islamic financial industry and has instituted a sound legal and regulatory framework and institutional setup for its development and growth. The Islamic Banking Act 1983 (IBA 1983) was legislated in 1983 to provide the legal basis for Islamic banks, and the Takaful Act 1984 was legislated to govern the establishment and regulation of takaful companies. The Banking and Financial Institutions Act 1989 (BAFIA amended 1993) was amended to accommodate Islamic banking practices in conventional banks to carry out Islamic banking business through windows. The Islamic Financial Services Act 2013 (IFSA 2013) updated and consolidated the legal framework for Islamic banks and the takaful sector by repealing IBA 1983 and Takaful Act 1984. IFSA 2013 provides robust legal foundations for the development of a stable Islamic banking and takaful sector by reinforcing the regulatory and supervisory framework to foster the soundness of financial institutions and strengthen the business conduct, consumer protection and integrity.
of the money and foreign exchange markets (Fen and Tsin 2013). A key feature of IFSA 2013 is the institution of robust Shariah governance at the organizational level and the highlighting of the role of the central Shariah Advisory Council (SAC) at BNM that oversees the Shariah-related issues at the regulatory level.

One of the requirements that IFSA 2013 introduced was the distinction between deposit and investment accounts. Unlike deposits, the latter would be like an investment where the customers take the risk of investments. As such, the principal amount for investment accounts is not guaranteed and the funds are not protected under the Perbadanan Insurans Deposit Malaysia (PIDM) scheme and the capital requirements are also less stringent. The Islamic banks had to convert the existing accounts into deposit and investment accounts by 2016 with consultations with their clients. Instead of investing the funds individually, Islamic banks decided to develop a unified platform called the Investment Account Platform that gathers the funds of investment accounts from different banks and invests in various ventures and projects.

The capital markets in Malaysia are governed by the Capital Markets and Services Act 2007 (Act 671) (CMSA 2007). The Act has provisions for Islamic securities and authorizes SCM to regulate different market segments that include the Islamic capital markets. As in the case of BNM, SCM also instituted the Shariah Advisory Council (SAC) with the objective of overseeing the Shariah issues related to capital market products. To facilitate the issuance of sukuk, SCM issued several specific guidelines such as Guidelines on the Offering of Islamic Securities (2004), Guidelines on the Offering of Asset-Backed Securities (2004), Sustainable and Responsible Investment (SRI) Sukuk Framework (2014), Guidelines on Issuance of Corporate Bonds and Sukuk to Retail Investors, Guidelines for Sustainable and Responsible Investment Funds (2017). SCM also issued Shariah parameters on Islamic Exchange Traded Funds based on Gold and Silver (2014). The above guidelines were subsequently replaced by the Guidelines on Unlisted Capital Market Products under the Lodge and Launch Framework (LOLA Framework). The LOLA Framework seeks to promote process efficiency, shorten times to the market, and provide certainty for product offerings for sophisticated investors.

Important feature that can partly explain the rapid growth of the sukuk sector in Malaysia is the tax incentives given for the issuance of sukuk. For example, incentives for the issuers of sukuk include tax deductions of the issuing costs incurred by SPVs and stamp duty exemption on instruments used to issue sukuk. The incentives for institutional investors to invest in sukuk include tax exemption and the withholding of tax exemption on profits received by non-resident investors. In the case of investments in foreign currency sukuk issued in Malaysia, there are stamp duty exemptions on investment and trading in sukuk and tax exemption on profits received by resident and non-resident investors. For retail investors, there is an

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50 https://www.sc.com.my/api/documentms/download.ashx?id=50633bce-a4b6-4d51-a6a4-e7007a049dc8
additional tax exemption on profits paid from sukuk issued or guaranteed by the government.\textsuperscript{51}

**4.2.5. Role of Islamic Finance in Infrastructure Finance**

The role of Islamic finance in providing finance for the infrastructure sector can be viewed in terms of financial institutions and markets and modes of financing in the form of equity or debt. Three ways in which the Islamic financial sector can provide the funds for infrastructure development can be identified. First is the taking of direct equity stakes in infrastructure-related projects or entities. Second, the investing of sukuk issued by infrastructure related projects or entities. Finally, the provision of direct financing to infrastructure related projects or entities. The role of broad types of institutions involved in providing Shariah-compliant financing for infrastructure projects and entities in Malaysia and the instruments used is discussed next.

**4.2.5.1. Government-Linked Companies (GLCs)**

A key feature of the Malaysian economy related to infrastructure development and finance is the role of government-linked companies (GLCs) in which the government has a controlling stake. While some GLCs are directly controlled by government agencies, others are subsidiaries and affiliates of GLCs. GLCs are funded by the government directly and through seven government-linked investment companies (GLICs).\textsuperscript{52} The GLCs constitute a significant sector in the economy, accounting for around 5% of the workforce, 36% of the market capitalization of Bursa Malaysia, and 54% of the Kula Lumpur Composite Index (Menon 2017). While some GLCs are directly involved in the infrastructure sector, others provide funds in the form of equity or debt and a few others provide a supporting role.

Some GLCs play an important role in the infrastructure sector with estimates of them providing 93% of the utilities, 80% of transportation and warehousing, and more than 50% in information communications (Menon 2017). Several infrastructure-linked GLCs have shareholding by GLICs, thereby providing them with funds for infrastructure-related activities. For example, Axiata Group Berhad, involved with mobile telecommunications with assets of RM70.49 billion (in 2016), is owned by Permodalan Nasional Bhd (15.55%), Kumpulan Wang Persaraan (2.67%) and Lembaga Tabung Haji (1.86%). Similarly, Telekom Malaysia Berhad, dealing with fixed-line telecoms, had assets worth RM 25 billion and its shareholders include Permodalan Nasional Bhd (20.43%) and Kumpulan Wang Persaraan (4.1%). Tenaga Nasional Berhad is the dominant player in the electricity sector with assets worth RM 132.0 billion and is owned by Permodalan Nasional Bhd (11.08%), Kumpulan Wang Persaraan (5.42%) and Lembaga Tabung Haji (1.83%) (Menon 2017: 5-6).

A few GLCs were established specifically to support long-term investments in large infrastructure projects. In 2011, the government established an Infrastructure Financing Entity, DanaInfra Nasional Berhad, with a paid-up capital of RM10 million wholly owned by the Ministry of Finance with the objective of separating the fund-raising function from the

\textsuperscript{51}http://www.mifc.com/index.php?ch=ch_kc_framework&pg=pg_kcfm_incentives&ac=209

\textsuperscript{52}The GLICs include the Employee Provident Fund (EPF), Khazanah Nasional Berhad, Kumpulan Wang Amanah Pencen (KWAP), Lembaga Tabung Angkatan Tentera (LTAT), Lembaga Tabung Haji (LTH), Menteri Kewangan Diperbadankan (MKD), and Permodalan Nasional Berhad (PNB).
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construction of projects. The mandate of DanaInfra is to execute and implement fundraising and payment strategies for major infrastructure projects, develop the best structures for long-term funding, and raise funds primarily from the capital markets at efficient costs. As of June 2017, DanaInfra has assets worth RM 37.261 billion, showing the level of funds raised to invest in infrastructure assets.

GLICs play an important role in financing infrastructure-related projects and entities. Permodalan Nasional Bhd is the investment vehicle for Yayasan Pelaburan Bumiputra, established as a vital instrument of Government’s New Policy to enhance the prosperity of the country and promote business ownership among Bumiputra.53 Kumpulan Wang Amanah Pencen (KWAP) is Malaysia’s largest public services pension fund with a total value of RM 140.8 billion in 2017.54 Khazanah Nasional Berhad, established in 1994 and owned by Minister of Finance Incorporated, is the strategic investment fund of the government of Malaysia. The market value of the assets of Khazanah was RM 157.2 billion in 2017 and it had investments in media and communications (17.0%), power (15.9%), healthcare (13.8%), transport and logistics (6.0%), innovation and technology (5.2%), infrastructure and construction (3.4%) and sustainable development (1.2%).55 Lembaga Tabung Haji (LTH) is a specialised financial institution providing long-term savings opportunities to individuals who plan to go for hajj (pilgrimage). With 9.1 million depositors in 2016, Tabung Haji has net assets of RM 65.994 billion invested in different sectors including the financial (18%), plantation (16%), construction (14%), telecommunications (12%), utilities (12%), properties (9%) and oil and gas (8%) sectors (LTH 2016).

While some of the largest GLICs are partly Shariah-compliant, LTH is wholly Islamic. GLICs in the former group include EPF (Malaysia’s largest retirement fund), with AUM worth RM266.5 billion (end-2016), of which 45% is Shariah-compliant, and KWAP (Malaysia’s 2nd largest retirement fund), with AUM RM126.8 billion (end-2016) of which 49.7% is Islamic (COMCEC 2018: 87). Other than investing in key sectors and industries that can nurture the long-term economic interests of Malaysia, Khazanah also plays a catalytic role in the development of Islamic finance.

Danajamin Nasional Berhad was established in 2009 with capital from Minister of Finance Incorporated (50%) and Credit Guarantee Corporation (50%) with the goal of providing financial guarantee insurance for bonds and sukuk issuances to Malaysian companies to facilitate their access to corporate bond/sukuk markets.56 The guarantees provided by Danajamin are accorded a rating of AAA by RAM Rating Services and Malaysian Rating Corporation (MARC). The enhanced ratings provided by Danajamin help promote the domestic corporate bond/sukuk market which serves as an alternative source of long-term financing that can stimulate economic growth. Regulated by BNM, Danajamin had RM 1.7 billion in shareholder equity and assets worth RM 2.7 billion as of 31 December 2017. By 2017, Danajamin had a total of 33 clients, 15 of which were Islamic entities. Several guarantees were given for infrastructure related projects such as Northern Gateway Infrastructure Sdn Bhd, West Coast Expressway Sdn Bhd, N.U.R. Power Sdn Bhd and TRIplc Medical Sdn Bhd.

53 http://www.pnb.com.my/about_e.php
54 http://www.kwap.gov.my/en
56 https://www.danajamin.com/index.php/about/who-we-are/
4.2.5.2. Islamic Financial Institutions

Financial institutions that provide Shariah-compliant financing for infrastructure projects and entities include Islamic banks, takaful companies, and other institutional investors such as pension funds. The asset composition and contribution of the Malaysian Islamic banking sector in financing the infrastructure sector is shown in Table 4.2.3. The total assets of Islamic banks in Malaysia in Q1 2018 were RM 665,288 billion (USD 172.265 billion). While the total Shariah-compliant financing of Islamic banks was RM 490,841 billion, constituting 73.8% of the total assets, only RM 29,112 billion (USD 7,538 billion) or 4.38% of this went to finance the infrastructure sector. Within the infrastructure sector, transportation and storage secured the highest financing of RM 11,780 billion (or 1.77% of the assets), followed by education with RM 8,965 billion (or 1.35% of assets). While the table showed that the sukuk holdings of Malaysian Islamic banks were valued at RM 86,897 billion (or 13.1% of the total assets), information on the proportion used for the infrastructure was not available.

Table 4.2.3: Islamic Banks Assets Composition and Financing of Infrastructure Sector (Q1 2018)

<table>
<thead>
<tr>
<th>Asset Composition</th>
<th>RM (million)</th>
<th>% of total</th>
<th>Financing going to infrastructure</th>
<th>RM (million)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Shariah-compliant financing (excluding interbank financing)</td>
<td>490,841.3</td>
<td>73.8%</td>
<td>Electricity, gas, steam and air-conditioning supply</td>
<td>2,505.4</td>
<td>0.38%</td>
</tr>
<tr>
<td>Sukuk holdings</td>
<td>86,897.6</td>
<td>13.1%</td>
<td>Water supply; sewerage and waste management</td>
<td>0.0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Other Shariah-compliant securities</td>
<td>80.4</td>
<td>0.0%</td>
<td>Transportation and storage</td>
<td>11,780.2</td>
<td>1.77%</td>
</tr>
<tr>
<td>Interbank financing</td>
<td>63,964.8</td>
<td>9.6%</td>
<td>Information and communication</td>
<td>3,744.9</td>
<td>0.56%</td>
</tr>
<tr>
<td>All other assets</td>
<td>23,504.8</td>
<td>3.5%</td>
<td>Education</td>
<td>8,965.3</td>
<td>1.35%</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>665,288.9</td>
<td>100.0%</td>
<td><strong>Total infrastructure</strong></td>
<td>29,112.6</td>
<td>4.38%</td>
</tr>
</tbody>
</table>

Source: IFSB Prudential and Structural Islamic Financial Indicators (PSIFIs)

As discussed in Chapter 2, the small share of the investments in the infrastructure sector can be attributed to various factors. Since assets are financed by liquid deposits that are short term, there is limited scope for investing in assets that are long term and illiquid. Furthermore, the BASEL III standards impose higher capital requirements for longer-term financing, which also discourages investment in infrastructure projects. A better way to invest in infrastructure would be to invest in sukuk issued by the infrastructure firms. The sukuk holdings of Malaysian Islamic banks are 13.3% of the total assets, which is almost double that of investments in the infrastructure sector. Since a part of sukuk is issued by the infrastructure sector, Islamic banks contribute to the sector indirectly through capital markets.

Since IFSA distinguishes between deposit and investment accounts, one way in which Islamic banks can increase the investments in the infrastructure sector is to use some of the funds from the latter in projects. As indicated, the proceeds from the investment accounts are collected in the Investment Account Platform (IAP) and are invested in different ventures and projects. Though the focus of IAP investments has so far been on business ventures, one
project that IAP has invested in is the RM 10 million term financing provided to Perak Transit Berhad for its working capital requirements.57

### 4.2.5.3. Capital Markets

Given the size of the capital markets in general and sukuk sector in particular, they play an important role in financing the infrastructure sector in Malaysia. The key players in the infrastructure sector are GLCs that receive their equity capital from the government and other GLICs and then raise funds from capital markets, a large part of which are sukuk. Ahmad (2017) reports that 61% of the world’s infrastructure sukuk was issued out of Malaysia during the period 2012 to 3Q2015. Chart 4.2.9 shows that more than 46% of the sukuk issued in Malaysia was by infrastructure-related entities (transport, storage, communications, energy, gas and water).

**Chart 4.2.9: Corporate Sukuk Issuer Profile in Malaysia (end of June 2015) (%)**

![Chart 4.2.9: Corporate Sukuk Issuer Profile in Malaysia (end of June 2015) (%)](source: IIFM (2016: 125)

**Chart 4.2.10: Investor Profile of Corporate Sukuk in Malaysia (%)**

![Chart 4.2.10: Investor Profile of Corporate Sukuk in Malaysia (%)](source: COMCEC (2018: 90)

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57 [https://iapplatform.com/investment/execution/completedProjlisting#!](https://iapplatform.com/investment/execution/completedProjlisting#!)
Chart 4.2.10 shows the investor profile of corporate sukuk in Malaysia. The majority (51%) of sukuk investors belong to the category of “commercial, Islamic and investment banks” while the insurance sector is the second largest holder of corporate sukuk (33%). The Employees Provident Fund holds around 10% of the sukuk and the remaining 6% is held by foreign commercial and Islamic banks. Although the data represents investors for all corporate sukuk, information from Chart 4.11 implies that around 46% of these are linked to the infrastructure sector.

The information from these charts and Table 4.3 reveals two interesting aspects of the Shariah-compliant financing of the infrastructure sector. First, while Islamic banks have the option of providing direct financing to infrastructure projects, the data shows that they do it in relatively small amounts and instead prefer to invest in the sector by investing in sukuk instruments. Second, issuing sukuk can tap into funds from both Islamic and non-Islamic institutions. However, this is not the case with conventional bonds since it limits the investments to conventional sources only. Thus, providing Shariah-compliant products to finance infrastructure projects can attract a larger investment base.

4.2.5.4. International Sources

Chart 4.2.11 shows the Islamic financing for infrastructure projects that Malaysia received from IDB. While 37 projects worth USD 719.8 million were financed during 1976-2016, Malaysia has not used IDB funds since 2016. The latter figure reflects the strategic decision Malaysia made after the Asian financial crisis, to not depend on external funds and to instead focus on raising funds domestically.

![Chart 4.2.11: Number of Projects and Financing from IDB: Malaysia](https://isdbdata.github.io/monograph2017.html)

**4.2.5.5. Case Studies**

In this final subsection, three case studies on sukuk issuances in Malaysia for infrastructure projects from different sectors is presented. While the first two of these were issued by GLCs to fund transport and education, the last one is a private sector initiative to finance green energy.
Case 1: Khazanah Sustainable and Responsible Investment Sukuk

Khazanah Nasional Berhad (Khazanah) issued an RM100 million Sustainable and Responsible Investment Sukuk in 2015 to fund schools under the non-profit foundation Yayasan AMIR Trust (YAT) School Programme. YAT was founded by Khazanah to improve the accessibility of quality education in Malaysian government schools through a PPP arrangement with the Ministry of Education. The first of its kind, the sukuk was issued via an independent SPV, Ihsan Sukuk Berhad (Ihsan), which planned to raise a total of RM1 billion through its sukuk programme. The first instalment of the seven-year tenor sukuk programme worth RM 100 million was issued in June 2015. The sukuk was rated AAA by RAM Ratings Services Berhad, reflecting Khazanah’s credit rating and was fully subscribed with interests shown from foundations, corporations, banks, pension funds and management companies. CIMB Investment Bank Berhad (CIMB) was the lead manager and the sukuk was structured using the wakalah bil istithmar principle.

Chart 4.2. 12: Structure of Khazanah Sukuk Ihsan

The sukuk was priced with a return guidance of 4.30% per annum. The Key Performance Indicators (KPIs) that would be assessed over a five-year timeframe were identified to assess the social impact. If the KPIs were fully met at maturity, the investors would forgo or contribute up to 6.22% of the nominal value due under the sukuk. This would be considered ‘Pay-for-Success’ and reduce the effective yield to 3.5% as recognition of the social impact produced by YAT, reflecting the social responsibility of the sukuk-holders. If the KPIs were not met or met partially, investors would receive up to the nominal value of the sukuk as agreed upon at issuance. The sukuk also had the option of converting the investment into a donation at any point during the tenor of the instrument. By the end of 2016, the Trust Schools...
Programme has been implemented at 83 schools in 10 states, providing better outcomes for over 65,000 Malaysians students.

In 2017, Khazanah issued the second tranche of the RM100 million sukuk that also had a retail component that gave opportunities to individuals to participate in the scheme. As in the case of the first issue, the sukuk had features of the step-down of returns upon achieving KPIs and the option to donate the principal to the Trust School Programme.

**Case 2: DanaInfra Retail Sukuk**

DanaInfra Nasional Berhad (DanaInfra), a company owned by the Ministry of Finance of Malaysia, was established in 2011 to undertake the funding of infrastructure projects assigned by the Government of Malaysia. The first infrastructure project initiated by DanaInfra was the USD 6.2 billion Klang Valley Mass Rapid Transit (MRT) Project. DanaInfra raised a total of RM2.5 billion (USD 789.14 million) by selling different series of sukuk to partly cover the total cost of the project. The series of retail sukuk included RM300 million (issued February 2013 with a 10 year maturity), RM 100 million (issued October 2013 with a 15 year maturity), and RM 100 million (issued July 2014 with 7 year maturity) paying a profit rate of 4.0%, 4.58% and 4.23% respectively. The sukuk was structured using a commodity murabahah contract and coupon payments were made semi-annually. Priced at MYR 100, the minimum subscription amount of the retail sukuk was MYR 1000. Investors could buy the sukuk by using different modes such as internet banking or through automated teller machines (ATMs) of participating banks and financial institutions (Star 2014 and DNB 2014). Guaranteed by the Government of Malaysia, the DanaInfra Retail Sukuk was listed and traded on Bursa Malaysia.

**Chart 4.2. 13: Structure of DanaInfra Retail Sukuk**

Source: Haneef (2016)
Case 3: Green SRI Sukuk Tadau

Although the Sustainable and Responsible Investment (SRI) Sukuk Framework was issued in 2014, the first green sukuk under this framework was issued in July 2017. Valued at RM 250 million (USD 59.2 million), the Green SRI Sukuk Tadau were issued by Tadau Energy Sdn Berhad as Islamic, medium-term notes to finance two solar power plants that would produce 50 MW of electricity in Kudat, Sabah. The investment in green energy is a private sector initiative of Tadau Energy which is a Malaysian private limited company established with the goal of constructing and operating solar projects by two other companies Kagayaki Energy and Edra Solar. While the former is a Malaysian renewable energy and sustainable technology investment firm, the latter is a wholly owned subsidiary of Edra Power Holdings which is an independent power producer with a diversified portfolio of renewable and fossil fuel power plants and is a subsidiary of CGN, a Chinese energy company involved in constructing and operating nuclear and renewable plants (CICERO 2017).

![Chart 4.2. 14: Structure of Green SRI Sukuk Tadau (Construction Stage)](http://issuance.sc.com.my/MemberAccessIssuance/documents/view-file/5079)

Green SRI Sukuk Tadau was issued in 15-tranches of two to 16 years maturities with coupon payoffs ranging from 4.8% for the RM14 million two-year component to 6.2% for the RM10 million 16-year piece. The sukuk structure was based on the principles of istisna, ijarah and ijarah mawsufah fi zimmah. The risks were mitigated by securing legal assignments of the issuer’s right, title and benefits in all the licenses and permits related to the project and two 21-year power purchase agreements with Sabah Electricity Sdn Bhd, an entity owned by state government of Sabah (Boey 2017). Rated at AA3 by RAM, Affin Hwang Investment Bank was the principal advisor, lead manager and arranger, underwriter and facility agent of the issue.

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The Centre for International Climate and Environmental Research-Oslo (CICERO) certified the Tadau sukuk with its highest rating of 'dark green' (CICERO 2017). After the issuance of the Green SRI Sukuk Tadau, other green sukuk were initiated in Malaysia that included a larger RM1 billion Sukuk for a Quantum Solar Park.

4.2.6. Conclusion and Recommendations

Malaysia has a relatively well-developed infrastructure and a mature financial market for raising funds for infrastructure investments. Although specific laws related to PPP and concessions appear to be lacking, the guidelines issued by the government have been adequate for the successful generation of resources from the private sector for financing infrastructure projects. An appealing feature of the funding of the infrastructure sector in Malaysia is the use of domestic resources to finance its development. The nature of PPP in Malaysia takes a different form with the GLCs playing an important role in not only providing infrastructure services but also generating significant resources to finance the projects. Investments by GLICs take the form of either providing equity capital to infrastructure-related GLCs or investing in sukuk issued by them. Some GLICs are involved in both Shariah-compliant financing and conventional financing. Tabung Haji is a unique Shariah compliant organization that provides long-term savings facilities to people for going to hajj (pilgrimage) and invests part of its funds in the infrastructure sector.

Malaysia has instituted a sound legal and regulatory framework for Islamic finance which has led to the robust growth of the industry. The experience shows that Islamic banks have contributed only 4.4% of their assets in infrastructure projects. This is partly due to the structure of the balance sheet of banks that have liquid liabilities, the financing limits that banks have, and also due to higher capital requirements for investments with long-term maturities. However, after the introduction of IFSA 2013 in Malaysia, Islamic banks were required to separate deposit and investment accounts. The investment account holders bore the risks of investments that are done in different projects. Since the capital requirements that apply to assets do not apply to assets funded by the investment account, the latter can be potentially used to finance infrastructure projects.

The bulk of the infrastructure financing is channelled through the capital markets in general and sukuk issuances in particular. While most of the infrastructure-related sukuk are issued by GLCs, private sector entities have also tapped in the sukuk market to finance infrastructure projects. Malaysia has also been at the forefront of experimenting with innovative sukuk issues that cater to social and sustainable development-related infrastructure segments. Examples of these include the impact sukuk and green sukuk. Given the large size and robustness of the sukuk market, various financial institutions invest in sukuk issued by infrastructure-based projects and entities.

Although nonbank financial institutions such as insurance/takaful companies naturally invest in sukuk, the Islamic banking sector also prefers to finance the infrastructure sector by investing in these instruments rather than directly financing infrastructure projects. The Islamic social sector has also been revitalized in some states and is used for providing social infrastructure services such as health.
Based on the results of the case study, the issues arising and recommendations are suggested in Table 4.2.4 to further enhance the role of Islamic finance in infrastructure development in Malaysia.

Table 4.2.4: Issues and Policy Recommendations: Malaysia

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure Related Strategies and Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• PPP projects and contracts are novel and complex.</td>
<td>• Develop Shariah-compliant contract templates for different types of PPP</td>
<td>• PPP Unit under the Prime Minister's Office.</td>
</tr>
<tr>
<td>• Although Danajamin in Malaysia provides guarantees for corporate</td>
<td>projects that help stakeholders to structure contracts.</td>
<td>• Danajamin</td>
</tr>
<tr>
<td>sukuk, there is a need to expand the guarantee to other project-</td>
<td>• Providing Shariah-compliant guarantees of the implementation of PPP contracts and making takaful cover political risks and partial credit risks.</td>
<td>• Relevant public bodies</td>
</tr>
<tr>
<td>specific risks to encourage private sector participation in</td>
<td></td>
<td>• Private sector insurance/takaful companies</td>
</tr>
<tr>
<td>infrastructure investments.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Legal and Regulatory Regimes</strong></td>
<td>• Balance financial stability objectives with lowering the capital requirements for investments in long-term projects to encourage the greater involvement of Islamic banks in infrastructure financing.</td>
<td>• Banking regulatory authority (BNM)</td>
</tr>
<tr>
<td>• The relatively higher capital requirements for long-term investments inhibit Islamic banks from investing in the infrastructure sector.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Government and Public Bodies</strong></td>
<td>• The scope of Dana Infra can be further expanded by creating a fund to encourage the pooling of resources from different institutional and retail investors in infrastructure projects.</td>
<td>• Dana Infra or a new GLIC</td>
</tr>
<tr>
<td>• Dana Infra was established to raise funds for infrastructure projects. Its facilitative role can be further expanded.</td>
<td>• Dana Infra can also provide advice on the issuance of sukuk and develop templates for issuing sukuk for infrastructure projects</td>
<td></td>
</tr>
<tr>
<td><strong>Islamic Financial Institutions</strong></td>
<td>• Increase the share of investments in infrastructure projects by Islamic banks by expanding the size of investment accounts which can be used for longer term investments.</td>
<td>• Islamic banks</td>
</tr>
<tr>
<td>• The direct investments in the infrastructure sector by Islamic banks in Malaysia are small.</td>
<td>• Create incentives to increase the share of the takaful sector in the overall insurance industry and share of Shariah-compliant components in the pension funds and sovereign wealth funds.</td>
<td>• Regulatory authorities</td>
</tr>
<tr>
<td>• The contribution of the Islamic nonbank financial institutions in Malaysia in the infrastructure sector is relatively small due to their small size.</td>
<td></td>
<td>• Islamic nonbank financial institutions</td>
</tr>
<tr>
<td><strong>Islamic Capital Markets</strong></td>
<td>• Develop Islamic funds and platforms for infrastructure investments.</td>
<td>• Relevant market players such as Islamic investment banks</td>
</tr>
<tr>
<td>• Islamic funds and platforms for infrastructure investments can</td>
<td></td>
<td></td>
</tr>
<tr>
<td>potentially increase the share of Islamic finance in developing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infrastructure projects.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Infrastructure Financing through Islamic Finance in the Islamic Countries

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
</table>
| While Malaysia has developed the sukuk market, infrastructure projects are funded by issuing both sukuk and bonds. | Issue more sukuk instead of bonds to finance infrastructure projects since the former has the potential to expand the investor base by including both conventional and Islamic investors. | Capital market authority  
Issuers (sovereign and corporate) |
| Islamic Social Sector                                                                                                          |                                                                                     | State level Religious Councils                              |
| The use of both waqf and zakat institutions can be enhanced to provide social infrastructure services by coming up with innovative solutions. Zakat and waqf are managed at the state level in Malaysia. | Increase the role of zakat and waqf by taking initiatives and knowledge-sharing programmes at the state level to develop innovative models of using these instruments to provide social infrastructure services. |                                                                                     |
4.3. Nigeria

4.3.1. Nigerian Financial Sector and Islamic Finance: An Overview

The financial sector of Nigeria is shaped by the Financial System Strategy 2020 (FSS2020) initiated in 2007. The aim of the strategy was to develop a robust and integrated financial system that is safe and fast-growing in emerging markets and which can be a catalyst for economic growth in order to make the Nigerian economy as one of the 20th largest economies in the world by 2020.59 Different regulatory bodies including Central Bank of Nigeria (CBN), Securities and Exchange Commission (SEC), National Insurance Commission of Nigeria (NICON) and stakeholders such as Nigerian Deposit Insurance Corporation (NDIC), Nigerian Stock Exchange (NSE) were expected to implement the strategy.

Chart 4.3.1: Relative Financial Sector Development in Nigeria (2016) (0-1 Highest)

![Chart showing relative financial sector development in Nigeria, OIC, and Africa]

Source: IMF Financial Sector Development Database

Chart 4.3.1 shows the status of the Nigerian financial system compared to OIC countries and the African region. While the overall development of the Nigerian financial sector (0.24) appears to be similar to the average of the OIC countries (0.23), it is better than the average for the African countries (0.16). However, while the index for the financial markets for Nigeria (0.20) is better than that of the OIC (0.13) and Africa (0.05), the index for the financial institutions in the country (0.24) lag behind the average of the OIC countries (0.33).

4.3.1.1. Islamic Finance Industry Overview

The Nigerian Islamic finance industry comprises Islamic banking, Islamic capital market and Takaful. Currently, the Islamic banking industry consists of a fully-fledged Islamic bank, Jaiz bank Islamic banking window; Sterling bank non-interest banking window; and two Islamic microfinance banks, Tijara and I-care non-interest microfinance banks. Stanbic IBTC non-interest banking window had previously sought and obtained the Central Bank’s approval to discontinue operations in December 2017, mainly due to persistent losses incurred by the Window since its inception in January 2011. The performance of the Islamic banking sector

vis-à-vis the entire industry in terms of deposit mobilization, credit/financing and asset base over a 3-year period are presented in Table 4.3.1 below:

Table 4.3.1: Performance indicators of Conventional and Islamic banks (USD million; Exchange rate: USD1 = N305.8)

<table>
<thead>
<tr>
<th></th>
<th>DEC. 2015 (USD Million)</th>
<th>DEC. 2016 (USD Million)</th>
<th>DEC. 2017 (USD Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Deposits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional banks</td>
<td>57,104.18</td>
<td>60,626.10</td>
<td>63,364.78</td>
</tr>
<tr>
<td>Non-Interest banks</td>
<td>129.90</td>
<td>164.43</td>
<td>222.74</td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>57,234.08</td>
<td>60,790.54</td>
<td>63,587.53</td>
</tr>
<tr>
<td>% Non-interest banks/Industry</td>
<td>0.23</td>
<td>0.27</td>
<td>0.35</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional banks</td>
<td>43,586.57</td>
<td>53,165.88</td>
<td>52,035.78</td>
</tr>
<tr>
<td>Non-Interest banks</td>
<td>83.06</td>
<td>115.62</td>
<td>122.67</td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>43,669.62</td>
<td>53,281.50</td>
<td>52,158.45</td>
</tr>
<tr>
<td>% Non-interest banks/Industry</td>
<td>0.19</td>
<td>0.22</td>
<td>0.24</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional banks</td>
<td>88,169.55</td>
<td>98,597.43</td>
<td>106,416.45</td>
</tr>
<tr>
<td>Non-Interest banks</td>
<td>177.59</td>
<td>229.81</td>
<td>297.60</td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>88,347.14</td>
<td>98,827.25</td>
<td>106,714.05</td>
</tr>
<tr>
<td>% Non-interest banks/Industry</td>
<td>0.20</td>
<td>0.23</td>
<td>0.28</td>
</tr>
</tbody>
</table>

Source: Central Bank Nigeria (CBN) Financial Analysis (FinA) System

Table 4.3.1 shows that Islamic banks contributed only 0.23%, 0.27% and 0.35% of the entire deposits in the industry in 2015, 2016 and 2017 respectively. Similarly, Islamic banks contributed only 0.19%, 0.22% and 0.24% of the total credit/financing in the industry over the same period respectively while the contribution by Islamic banks was only 0.20%, 0.23% and 0.28% of the total assets in the industry in 2015, 2016 and 2017 respectively. Overall, even though the performance of Islamic banks relative to the entire industry was dismal on all the three indicators, it portrayed a steady, marginal growth over the period.

The Islamic capital market in Nigeria comprises of Islamic mutual funds and Sukuk. There are two types of Islamic funds in the market: closed and open-ended mutual funds. The open-ended mutual funds are the Lotus Capital Halal Fund and the Stanbic IBTC Imaan fund while the closed fund is the Lotus Halal Exchange Traded Fund (ETF). The net asset value (NAV) of the Islamic funds vis-à-vis the total funds in the industry for the period 2015-2017 is presented Table 4.3.2. Even though the NAV of the Islamic fund consistently rose over the period, its composition in the industry fluctuated as it was 1% in 2015 before increasing to 1.26% in 2016 and then declining to 0.76% in 2017. This fluctuation is explained by the fluctuating conventional mutual funds over the period.
There are two Sukuk issued in Nigeria. A Sub-national Sukuk worth about $62 million (N11.4 billion) was issued by the Osun state government in 2013 for the construction of schools, and a Sovereign Sukuk valued at $277.93 (N100 billion) was issued in 2017 by the Federal Government for the rehabilitation and construction of roads across the Country.

The Takaful industry has two, full-fledged Takaful companies which commenced operations in 2017 and three (3) Takaful windows of conventional insurance companies. The contribution of the Takaful industry relative to the entire insurance industry (Takaful and insurance) is quite insignificant

4.3.2. Current Status and Projected Investments in Infrastructure Sectors

Chart 4.3.2 shows the relative status of infrastructure in Nigeria compared to the average of the OIC and Sub-Saharan Africa. The index for overall infrastructure and its quality in Nigeria (2.0 and 2.3 respectively) is lower than the averages of both OIC countries (3.6 and 3.7 respectively) and Sub-Saharan Africa (2.9 and 3.2 respectively). The same trends can be observed for the transport, electricity and telephony infrastructure where the index values are the lowest for Nigeria (2.3 and 1.8 respectively).

Chart 4.3.2: Relative Status of Infrastructure in Nigeria (2017) [0-7 Best]
The low levels of infrastructure quantity and quality imply that the investment in the sectors has not been adequate. Chart 4.3.3 shows the involvement of the private sector in infrastructure development over the 2005-2010 and 2011-2016 periods. The bulk of the private sector investments appear to have been made in the telecommunications sector during both periods (USD 16.696 billion in 2005-2010 and USD 7,083 billion in 2011-2016) followed by the transport sector (USD 3.099 billion in 2005-2010 and USD 4,659 billion in 2011-2016). Although the energy sector also had some investments during these periods (USD 1,108 billion in 2005-2010 and USD 1,287 billion in 2011-2016), there were no investments made in the water and sanitation sector.

Table 4.3.4 shows the infrastructure investments that are projected for 2016-2040 under the assumption of current trends and investment needs. Over the period, there seems to be a shortfall of USD 221 billion with most of it needed in roads (USD 80 billion), followed by electricity (USD 61 billion), telecoms (USD 47 billion) and railways (USD 21 billion).

Nigeria developed the National Integrated Infrastructure Master Plan (NIIMP) in 2014 to fast-track infrastructure development in Nigeria. The projected deficits according to the Masterplan for the period 2018-2043 are even higher. The total required infrastructure financing requirements for the various sectors (transportation, energy, agriculture water and mining, housing sector, social sector infrastructure, vital registration and security sector and
ICT sector) is estimated to be at USD 225.54 billion for 2018, USD 1.1 trillion by 2023 and USD 3 trillion by 2043. However, the funds being mobilized through budget, public debt, PPP, World Bank and Other sources in 2018 for infrastructure finance amount to only USD 26.24 billion. So in 2018 alone, there will be an infrastructure financing gap of about USD 199 billion and a similar pattern is anticipated over the NIIMP life span.

4.3.3. National Level Policies and Framework of Infrastructure Development

The Federal Government has been the primary financier of infrastructure projects in Nigeria and this has been volatile because of unstable budgetary allocation failing to meet the infrastructure needs of the country. This situation has forced the Government to come up with some policies to aid infrastructure financing in the country as there is a gradual recognition that budget allocations may not be the best way to finance and execute infrastructure development. Therefore, methods for the public and private financing of infrastructure development in various parts of the world have evolved to meet the emerging priorities and requirements of infrastructure development (ADB 2013).

It is on this basis that the government of Nigeria inaugurated the Infrastructure Concession Regulatory Commission (ICRC) in 2005 with a clear mandate to develop the guidelines, policies, and procurement processes for PPP. The ICRC collaborated with the States to promote an orderly and harmonized framework for the development of Nigeria’s infrastructure and to accelerate the development of a market for PPP projects (World Bank 2016). The National Policy on Public Private Partnership was launched in 2009 to provide a framework for increasing the participation of the private sector in the economy.60 The policy identifies the steps that the Government should take to increase private investment to reduce the infrastructure deficit and improve public services in a transparent and sustainable way in accordance with the best international practices. Furthermore, ICRC issued a Draft PPP Manual for Nigeria in 2017 that outlines the different aspects of PPP implementation in the country.61

The National Planning Commission developed the National Integrated Infrastructure Master Plan (NIIMP) in 2014. It provides the roadmap for building a world class infrastructure that will guarantee sustainable economic growth and development and enable the nation to take advantage of the vast opportunities in the domestic and global economies and enhance the nation’s competitiveness and improve the quality of life of the citizenry. It provides an integrated view of infrastructure development in Nigeria with clear linkages across the key sectors of the economy (NIIMP 2014). NIIMP identified Transport, Energy, ICT and Water as ‘core infrastructure’ and Agriculture, Mining, Social Infrastructure, Housing, Vital Registration and Security as ‘non-core infrastructure’.

The implementation of the infrastructure master plan would require a total investment of USD 3 trillion over a 30 year period (2014 – 2043) and financing will require both public and private sector participation. It is against this background that the following strategies for financing the infrastructure needs of the country are identified:

**Government Budgets:** The proportion of the budget allocated for infrastructure financing was 38% of the capital expenditure in 2018 while it will be 29% throughout the remaining NIIMP period (2019 – 2043) (NIIMP 2014). And with a budgetary capital expenditure of USD 9.4

billion in 2018, it implies that the budgetary provision for infrastructure financing in 2018 is USD 3.6 billion (Budget Office 2018).

**Public Debt:** The government could raise an additional USD 76 billion by sustaining its current, relatively conservative debt ratio level of around 20% of GDP over the period 2014–18. This implies that, on a yearly basis, the public debt to be raised would be USD 15.2 billion (NIIMP 2014).

**Other Public Sources (e.g., the Sovereign Wealth Fund (SWF):** USD 1.4 billion is available in 2018 from the SWF, and the Fund should subsequently continue to allocate 32.5% of its assets to infrastructure financing. USD 1 billion could also be sourced from public pension funds in 2018 and subsequently an allocation of 20% of the funds to infrastructure as per 2012 regulation on the investment of funds (NIIMP 2014).

**Public Private Partnerships (PPPs):** Opportunities also exist for Nigeria to finance its public infrastructure requirement through PPPs. Nigeria has the potential to mobilize between USD 3 – 5 billion through PPPs in 2018 (NIIMP 2014).

**Funding by Multilateral Development Institutions:** The African Development Bank had, in 2017, signed over the sum of USD 2.84 billion to Ministries, Departments and Agencies (MDAs) for infrastructure development across various sectors of the Nigerian economy (ADB Data Portal). Similarly, the World Bank in 2018 approved USD 486 million to improve the Nigeria Electricity Transmission Network and Infrastructure over a 5-year period, implying a yearly infrastructure financing of USD 40.5 million (World Bank 2018).

### 4.3.4. Legal and Regulatory Framework for Infrastructure Investments


The Infrastructure Concession Regulatory Commission (Establishment) Act 2005 is the principal legislation for the regulation of PPP contracts through Federal Government Infrastructure. It provides an enabling environment for infrastructure investments by empowering the relevant agency to make policies, rules and regulations guiding the PPP as well as taking custody of every concession agreement to ensure its efficient execution by the Federal Government (ICRC Act 2005). Other supporting laws help to instil greater confidence in investors by stipulating severe punishment for corrupt practices in transactions and providing protection to those who disclose information in respect of corrupt practices committed or likely to be committed by other persons (CP Act 2000). Investors are also protected from all forms of Financial crimes that may be perpetrated against them (EFFC, 2004). Furthermore, in the event of the bankruptcy and insolvency of a corporate entity, there
are fair resolution proceedings stipulated in the laws (CAMA 1990). The availability of information on public entities is paramount for investment decisions, and, to ensure that investors are adequately informed about any public entity, the FOI Act 2011 ensures that public records and information are freely available. Rascality of Government in terms of expenditure can also have a significant impact on investors’ decisions, and, in order to give some level of assurance to the investors, the FR Act 2007 ensures that the government spends responsibly.

The relevant laws in the transportation Sector that encourage infrastructure investments are the Federal Highways Act, National Railway Corporation Act, Nigerian Civil Aviation Authority Act, Nigerian Ports Authority Act, and the Nigerian Inland Water Ways Act. These laws are in consonance with the Constitution of Nigeria and are generally flexible by encouraging sub-national participation. However, some of the laws present some challenges that are not investor friendly (NIIMP 2014).

The Power sub-sector has Electric Power Sector Reform Act 2004 as its enabling law. (NIIMP 2014). The Housing Sector has four key legislations that facilitate infrastructure investments. These are: the Land Use Act, the Federal Housing Act, the National Housing Fund Act and the Mortgage Institutions Act. The Land Use Act has some bureaucratic bottlenecks that discourage private sector investments. Similarly, the Federal Housing Act has some provisions that may create conflict between the State and Federal governments as to the choice and location of housing projects, thereby discouraging private sector participation (NIIMP 2014).

4.3.4.1. Public Procurement Regime

Public Procurement (PP) Act 2007 defines the procedures for the procurement of infrastructure projects in the country. The Act assures investors with policies and practices on public procurement which promote probity, accountability and transparency in the procurement process. Investors will also be assured of managing the privatized entities because such entities will be managed by strategic investors from the effective date of the privatization on such terms and conditions as may be agreed upon (PE Act 2004). The status of the different stages of the procurement regime identified by World Bank (discussed in Chapter 2) for Nigeria is shown in Chart 4.4. While the preparation stage of procurement for Nigeria is the weakest, scoring only 27, the procurement process itself is ranked high with a score of 71. The score for the contract management part (53) is relatively better than the Sub-Saharan region low-income and lower-middle income groups. Compared to OIC members, Nigeria has a lower score for the preparation stage but higher scores for the procurement and contract management stages.
Chart 4.3.4: Procurement Regime of PPPs: Nigeria (0-100 Highest)

Source: World Bank (2018f)

4.3.5. Legal and Regulatory Framework for Islamic Finance

Nigeria has no dedicated laws for Islamic Finance. However, the legal framework for Islamic finance was derived from the existing conventional finance laws by leveraging on some provisions to establish Islamic financial institutions. The main laws leveraged upon were: Company and Allied Matters Act (CAMA) 1990, Banks and Other Financial Institutions Act (BOFIA) 1991, Central Bank of Nigeria (CBN) Act 2007, Investment and Securities Act (ISA) 2007, National Insurance Commission (NAICOM) Act 1997, Insurance Act 2003, and Nigerian Deposit Insurance Act 2006. These Acts empowered the regulatory bodies to make four key regulations that facilitated the emergence and development of the Islamic finance industry in Nigeria. On infrastructure financing, there are no separate general or specific laws or regulations put in place for Islamic finance.

There are some developments in the regulatory environment which have enhanced the prospect for sukuk issuance. These include the Rules on Sukuk issued by SEC in 2013, the Guidelines on tax treatment for Sukuk issued by FIRS in 2013, the launching of Non Interest Capital Market Products (NICMP) Master Plan in 2015 by SEC, the Guidelines on granting liquidity status to State Government’s Sukuk issued by the CBN in 2016, and the Guidelines on investment by Pension Fund Administrator issued by PENCOM (COMCEC 2018).

4.3.6. Role of Islamic Finance in Infrastructure Finance

As indicated, the National Integrated Infrastructure Master Plan (NIIMP) shows huge gaps in the funding needs expecting in the infrastructure development in Nigeria during 2018-2043. While the figures indicate tremendous infrastructure financing opportunities, the role that different sectors of Islamic finance can play to fill some of the gaps are discussed next.
4.3.6.1. Islamic Banks

The Islamic banks participate in the financing of schools and houses. As of 31st December 2017, the industry's financing of schools and houses has amounted to about USD 55.22 million (Annual report 2017, Management Account Dec. 2017). Islamic banks have mainly employed *Ijarah wa Iqtina* and *Istisna* as modes of financing these types of infrastructure needs. Noble Hall Academy and Bima Housing Estate are classical cases of such financing by the Islamic banks in the Federal Capital. Given the huge infrastructure financing gap, enormous opportunities exist for Islamic banks in terms of infrastructure financing. However, the sector is being challenged by a number of factors which limit their ability to finance infrastructure development. Firstly, the regulatory prudential requirement capped the limit to which an Islamic bank can be exposed to a single obligor at a maximum of 20% of its Shareholders' funds unimpaired by losses. Additionally, aggregate large exposures in any Islamic bank should not exceed eight times the Shareholders' funds unimpaired by losses (PG 2010). Secondly, similar to the conventional banks, granting financing with longer maturities as required by infrastructure investment will pose a serious challenge to Islamic banks.

4.3.6.2. Islamic Capital Market

The industry's current involvement in infrastructure financing is put at about USD 289.33 million derived from Sovereign and Subnational *Sukuk*. The Subnational *Sukuk* financed the construction of schools while the Sovereign *Sukuk* was deployed to the construction of 25 priority roads around the country (Udoma 2018). These *Sukuk* were *Ijarah*-based *Sukuk*. The huge infrastructure financing gap as well as the long-term nature of infrastructure investment present great prospects for *Sukuk* issuance in Nigeria. Both sukuk issuances were oversubscribed, indicating the high demand for an alternative form of investment. Both sukuk were *Ijarah*-based and their features were briefly presented as case studies below.

4.3.6.3. Case Studies

**Case Study: Subnational Osun Sukuk**

The Osun State Government issued the first Sukuk in the country in 2013 in order to raise funds for the purpose of building schools. The State Government, through a Special Purpose Company (Osun Sukuk Company Plc), issued the first Sukuk worth N11.4 billion ($37.28 million) on the 8th of October 2013 under the Osun State N60 Billion Debt Issuance Programme to fund the development of 20 High Schools, 2 Middle Schools and 2 Elementary Schools in the state (Oladunjoye (2014)).

The Osun Sukuk Company Plc was incorporated by Osun State Government as a Special Purpose Company (SPC) for the issuance of the Sukuk. The Sukuk was structured as Al-*Ijarah*. The SPC issued the Sukuk certificates to the investors and the proceeds realized represented the cost of the construction of the Schools, being the Ijarah assets which are in held in trust on behalf of the investors by the SPC. The investors have no recourse to any assets of the SPC other than the Sukuk assets and they can freely trade the Sukuk on the secondary market. The SPC under an agency agreement appointed the Osun State Government (OSG) to engage a construction company to construct the schools, obtain all government approvals, manage the operational and financial aspects of the construction for a prescribed fee, and transfer the agreed cost of construction to the OSG. The SPC forward-leased the schools to the State Government against rental payments which would be remitted to the issuer to make
distributions to the Sukuk investors. A Purchase Undertaking was executed by the OSG in favour of the Issuer to give assurances that, at the end of the lease/maturity of the Sukuk, or upon the occurrence of an event of default or early termination of the lease under the Ijara Agreement, the OSG would purchase the Sukuk assets. The Purchase Undertaking was meant to eliminate market risk on the part of the investors. Similarly, a Sale Undertaking was also executed by the Issuer in favour of the OSG. The Sukuk structure was certified as Shari’ah-compliant by the Shari’ah Advisers\textsuperscript{62} (Oladunjoye (2014)). The basic features of Osun sukuk are shown in Table 4.3.4.

<table>
<thead>
<tr>
<th>Features</th>
<th>Osun Sukuk</th>
<th>FGN Roads Sukuk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuer and Trustee</td>
<td>Osun Sukuk Company Plc</td>
<td>FGN Roads Sukuk Company 1 Plc</td>
</tr>
<tr>
<td>Obligor</td>
<td>Osun State Government (OSG)</td>
<td>Federal Government of Nigeria</td>
</tr>
<tr>
<td>Nature of Instrument</td>
<td>Subnational Sukuk – Medium Term</td>
<td>Sovereign Sukuk – Medium Term</td>
</tr>
<tr>
<td></td>
<td>Sukuk (the Osun Sukuk)</td>
<td>(the FGN Roads Sukuk)</td>
</tr>
<tr>
<td>Structure Type</td>
<td>Ijarah</td>
<td>Ijarah</td>
</tr>
<tr>
<td>Purpose</td>
<td>To raise funds for the development</td>
<td>To raise funds for the execution of</td>
</tr>
<tr>
<td></td>
<td>of 20 High Schools, 2 Middle</td>
<td>25 road projects in the six geopolitical zones of the country</td>
</tr>
<tr>
<td></td>
<td>Schools and 2 Elementary Schools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>in Osun State</td>
<td></td>
</tr>
<tr>
<td>Issue Size</td>
<td>N11.4 billion ($31.67 million)</td>
<td>N100 billion ($278 million)</td>
</tr>
<tr>
<td>Issue Date</td>
<td>8(^{th}) October 2013</td>
<td>22(^{nd}) September 2017</td>
</tr>
<tr>
<td>Maturity</td>
<td>8(^{th}) October 2020</td>
<td>22(^{nd}) September 2024</td>
</tr>
<tr>
<td>Rental Rate</td>
<td>14.75%</td>
<td>16.47%</td>
</tr>
<tr>
<td>Redemption</td>
<td>Sukuk will be redeemed in a lump sum at Maturity</td>
<td>Sukuk will be redeemed in a lump sum at Maturity</td>
</tr>
<tr>
<td>Listing</td>
<td>NSE and FMDQ</td>
<td>NSE and FMDQ</td>
</tr>
<tr>
<td>Ijarah Assets</td>
<td>Schools</td>
<td>Roads</td>
</tr>
<tr>
<td>Rating</td>
<td>Bbb+ (Augusto &amp; Co)</td>
<td>B (Fitch)</td>
</tr>
</tbody>
</table>

Sources: Oladunjoye 2014, COMCEC 2018, Prospectus 2017

The Osun Sukuk was fully subscribed and was mainly taken up by local banks, fund managers, insurance companies and high-net-worth individuals. The tax incentives which were approved by the federal government in March 2010 entitled the Sukuk holders to payments that were free from withholding, state and federal income and capital gains taxes, with no deductions at source. Additionally, proceeds from the disposal of the Sukuk and stamp duty on its sale or transfer are exempted from taxation. The tax incentive was seen as a motivator to the subscription of the Sukuk (COMCEC, 2018).

Case Study: Sovereign FGN Roads Sukuk

The N100 billion (about $327.01) Sovereign Sukuk was issued by the FGN in 2017 to raise funds for the construction/rehabilitation of 25 roads across the six geopolitical zones of the country. The offer was subscribed by investors across a broad spectrum. Pension funds, banks, insurance companies, banks, etc.

\textsuperscript{62} Shari’ah Advisers were Dr. Mohamed El-Gari, Prof Monzer Kahf and Prof. M.L. Bashar
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fund managers, institutional and retail players, and the tax incentives accorded to the Sukuk also contributed to its oversubscription by about 5.8% (COMCEC 2018).

The Federal Government of Nigeria (FGN) incorporated an SPC, the FGN Roads Sukuk Company 1 PLC ("Issuer/Trustee"), to issue the Sukuk on its behalf. The FGN issued a letter of allocation of specific sections of land to the Issuer/Trustee for the construction and rehabilitation of identified Federal Highways. The FGN through the Federal Ministry of Power, Works and Housing ("FMPWH") executed a Forward Ijarah Agreement with the Issuer/Trustee to lease the constructed roads. A unilateral Purchase Undertaking was executed by the Issuer/Trustee to purchase constructed roads from the Issuer/Trustee at maturity. The Issuer/Trustee declared a trust over the Roads to be constructed in favour of the Sukuk holders under a Declaration of Trust Deed and appointed FBN Trustees and STL Trustees (the “Delegate Trustees”) to carry out its functions as a Trustee under the trust. Investors subscribed to the offer and the Issuer/Trustee issued electronic investment certificates through the CBN as registrar. The Issuer/Trustee entered into a Construction Agency Agreement with FMPWH to appoint contractors to construct/supervise the roads. The Issuer/Trustee also entered into a Service Agency Agreement with the FMPWH to undertake major repairs on the roads after construction. The Issuer/Trustee paid the contractors through the FMPWH for construction/rehabilitation of roads from the Sukuk proceeds after the work done by the contractors was certified by the FMPWH and the Delegate Trustees. The contractors delivered the completed roads to the Issuer/Trustee through the FMPWH. The Issuer/Trustee (as Lessor) then leased the Roads to FGN (as Lessee) in line with the Forward Ijarah Agreement. The FGN pays periodic rentals for the use of the roads and purchase amounts at maturity to the FGN Sukuk Repayment Account with the CBN. The CBN, therefore as a Paying Agent, transfers the periodic distribution amounts to Sukuk holders as per the scheduled dates. At the maturity of the Sukuk, the Roads will be purchased by the FGN (Prospectus, 2017). The Sukuk structure was certified as Shari’ah compliant by the FRACE (Shari’ah Board of the financial sector’s regulatory agencies).

4.3.5.4. Social Sector (waqf, hajj funds)

The hajj funds are short term funds as they are mobilized and used by the Hajj Commission within one year. As such, they are not ideal for infrastructure financing. The act of Waqf, though not institutionalized, has been in Nigeria for a fairly long period of time. The prospect for Waqf in Nigeria is promising as various States in the North have continued to set up Waqf funds. Zamfara State, being the first State to institutionalize the act of Waqf, has set up an Endowment Board which is empowered by law to collect one-percent contract deductions for every approved contract in the State. Similarly, Bauchi State has set up a Commission to manage waqf and, as part of its efforts to realize the full potential of waqf in the State the Commission, has introduced various waqf accounts for different categories of people. Furthermore, 9 States in the north have already enacted laws to legislate the act of waqf with more States expected to follow (Obaidullah and Shirazi 2015).

The Zamfara State government established Waqf Fund in 2003 with about USD 6,867.23. This grew to USD 1.31 million by 2013. Similarly, the Bauchi State government also introduced various waqf accounts for different categories of people, particularly the High Net Worth individuals and the Funds and have so far received Cash Waqf amounting to about USD 16,448.65. (Obaidullah and Shirazi 2015). The Waqf funds are largely used for developing
infrastructure in the education and social sectors. However, the contribution of Waqf to infrastructure financing is quite insignificant.

4.3.5.5. International Sources

The IDB has been involved in infrastructure financing in Nigeria since 1991. It has been involved mainly in Petrochemical, Energy, Educational, Health, Water, and Agricultural infrastructure financing. Chart 4.3.5 shows the project financing provided by IDB to Nigeria during 1976-2016 and 2016 onwards. While 16 projects worth USD 452 million were financed by IDB during 1976-2016, one project valued at USD 1.6 million has been funded since 2016. Currently, the active projects in the country financed by IDB include the Bilingual Education Project in nine (9) States of the Federation and the Kano State Agro-Pastoral Development Project.

Chart 4.3.5: No. of Projects and Financing from IDB: Nigeria (USD million)

![Chart 4.3.5: No. of Projects and Financing from IDB: Nigeria (USD million)](source: https://isdbdata.github.io/monograph2017.html)

4.3.7. Conclusion and Recommendations

Nigeria has a poor infrastructure in all sectors of the economy. In 2014, a National Integrated Infrastructure Master Plan was developed to provide a blueprint for the infrastructure transformation of the country. The blueprint identified the infrastructure gap and estimated that Nigeria needed to make a total infrastructure investment of $3 trillion by 2043. The blueprint highlighted the national policies and framework for infrastructure development, particularly the PPP framework and other funding models. It identified the Infrastructure Concession Regulatory Commission (ICRC) Act (Establishment) 2005 as the key legislation in the infrastructure development framework as well as some other general laws and sector-specific laws which provide the enabling environment for investment in infrastructure development.

The government is, however, constrained by budgetary deficits if required to solely finance the infrastructure needs. Hence the need for the PPP framework as well as domestic and external borrowings in order to finance the infrastructure needs is recognized. The financing options advanced by the blueprint present a great opportunity for Islamic finance. Despite this great
opportunity, both the Islamic banking and the Islamic Capital Market sectors are being challenged by some fundamental issues which limit their active participation in the financing scheme. For the sectors to fully benefit, the regulatory authorities need to come up with some suitable policy actions.

The Islamic banking sector is relatively new and small in the country. With assets of only 0.28% of the overall banking sector, Islamic banks are not able to contribute to infrastructure projects which require large amounts of investments. The regulatory limits on exposures for banks inhibit Islamic banks from investing in large infrastructure projects. Furthermore, Nigeria does not have an active Islamic money and interbank market, and this also discourages Islamic financial institutions from investing in assets with long-term maturities as it creates liquidity risks.

While Nigeria has issued a number of sukuk to finance infrastructure projects, the issuance has not been frequent. Furthermore, the NICMP Master Plan has identified additional challenges that are militating against the development of the sukuk market which includes awareness and knowledge gaps, limited legal and regulatory framework, dearth of market players, product deficit and the lack of a secondary market. Although some states in Nigeria have enacted enabling laws on waqf, its use for social infrastructure services has been insignificant. The challenges facing the sector are dominance by informal activities and the size of the funds being very small.

Although Islamic finance is relatively new in Nigeria, Table 4.3.5 outlines the issues and recommendations that can further enhance its role in infrastructure development in the country.

Table 4.3.5: Issues and Policy Recommendations: Nigeria

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure Related Strategies and Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Islamic finance is relatively new in Nigeria and PPP contracts are novel and complex for most stakeholders.&lt;br&gt;• Islamic banks are small and infrastructure investments are deemed too risky for them.</td>
<td>• Develop Shariah-compliant contract templates that can be used for different types of PPP projects&lt;br&gt;• Expand the scope of guarantees and insurances to cover risks such as political risks and partial credit risks in a Shariah-compliant manner to encourage Islamic financial institutions to participate in infrastructure projects.</td>
<td>• Infrastructure Concession Regulatory Commission (ICRC)&lt;br&gt;• Islamic financial industry stakeholders&lt;br&gt;• Relevant public bodies&lt;br&gt;• Private sector insurance/takaful companies</td>
</tr>
<tr>
<td><strong>Legal and Regulatory Regimes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The laws for Islamic banking, takaful and capital markets/sukuk are incorporated in the existing financial laws.&lt;br&gt;• Islamic bank contribution to infrastructure development can also be enhanced by jointly funding the projects with other banks through syndicated financing.</td>
<td>• Enact specific Islamic financial laws to provide a sound legal and regulatory basis for the development of the Islamic financial industry in Nigeria.&lt;br&gt;• Create a sound legal and contractual framework for Islamic bank participation in syndicated financing in infrastructure projects with both Islamic and conventional banks.</td>
<td>• Relevant government ministries.</td>
</tr>
</tbody>
</table>
## Infrastructure Financing through Islamic Finance in the Islamic Countries

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
</table>
| **Islamic Financial Institutions**                                       | • Introduce long-term risk-sharing investment accounts in Islamic banks that can be used for infrastructure projects. | • Relevant ministry and regulators  
• Islamic banks                                                            |
| • The short-term and liquid liability structure of Islamic banks makes it difficult for Islamic banks to invest in long-term infrastructure projects. Since the investors of investment accounts bear the risks of the investments, Islamic banks would hold relatively less capital for investments made from these accounts. | • Develop a well-functioning Islamic money market and instruments to help Islamic banks to mitigate liquidity risks that may arise from long-term investments.  
• Introduce takaful companies, Islamic investment banks and Shariah-compliant pension funds.  
• Establish an Islamic infrastructure fund/bank that can pool resources from different investors to increase investments in infrastructure projects. | • Central bank  
• Other stakeholders such as Islamic financial institutions  
• Regulatory authorities  
• Islamic nonbank financial institutions |
| • Nigeria has an underdeveloped Islamic money market with few liquidity management instruments. | • Issue more sukuk to finance infrastructure projects.  
• Develop a market and infrastructure for Islamic capital market/sukuk.  
• Provide advice on the issuance of sukuk and develop templates for issuing sukuk for infrastructure projects.  
• Issue retail sukuk  
• Introduce financial literacy programs to increase the literacy of Islamic finance  
• Introduce efficient mechanisms for the delivery and redemption of sukuk issues. | • Issuers (sovereign and corporates)  
• Capital markets authority  
• Capital markets authority  
• Capital markets authority  
• Issuers (sovereign and corporates)  
• Financial institutions |

| Islamic Capital Markets                                                 | • Since the sukuk issued in Nigeria for infrastructure projects were over-subscribed, there is potential for the issuance of more sukuk to fund the huge infrastructure needs of the country. | • Issuers (sovereign and corporates)  
• Capital markets authority  
• Capital markets authority  
• Capital markets authority  
• Issuers (sovereign and corporates)  
• Financial institutions |
| • Sukuk structures are complex and new in the country.                  | • Retail sukuk can be an alternative source of funds for infrastructure projects. | • Central bank  
• Other stakeholders such as Islamic financial institutions  
• Regulatory authorities  
• Islamic nonbank financial institutions |
| • Issue retail sukuk  
• Introduce financial literacy programs to increase the literacy of Islamic finance  
• Introduce efficient mechanisms for the delivery and redemption of sukuk issues. | • Issue retail sukuk  
• Introduce financial literacy programs to increase the literacy of Islamic finance  
• Introduce efficient mechanisms for the delivery and redemption of sukuk issues. | • Central bank  
• Other stakeholders such as Islamic financial institutions  
• Regulatory authorities  
• Islamic nonbank financial institutions |

| Islamic Social Sector                                                  | • Developing innovative models of zakat and waqf can potentially provide social infrastructure services. | • Zakat and waqf institutions |
| • Increase the proceeds from zakat and waqf by using innovative structures that can help develop social infrastructure sectors. | • Increase the proceeds from zakat and waqf by using innovative structures that can help develop social infrastructure sectors. | • Zakat and waqf institutions |

---

**Note:** The table above outlines the issues and recommendations for infrastructure financing through Islamic finance, focusing on Islamic financial institutions, Islamic capital markets, and Islamic social sector. Each issue is matched with appropriate recommendations and the entities responsible for implementation are also specified.
4.4. Saudi Arabia

4.4.1. Financial Sector and Islamic Finance Overview

The Saudi Arabian economy is currently guided by Vision 2030 which was launched in 2016. The vision has three pillars (a vibrant society, a thriving economy and an ambitious nation) and six strategic objectives that include strengthening the Islamic and national identity, offering a fulfilling and healthy life, growing and diversifying the economy, increasing employment, enhancing government effectiveness, and enabling social responsibility. The document recognizes the role of establishing the necessary infrastructure to realize Vision 2030 and support its objectives. Several specific programs were initiated to accomplish various aspects of the Vision, which include the National Transformation Program, Financial Sector Development Program, Public Investment Program, Housing Program and National Companies Promotion Program.

The financial sector of Saudi Arabia is well-developed compared to the averages of the OIC countries and the Middle East and Central Asian (MECA) region. Chart 4.4.1 shows that the overall index of financial sector development stands at 0.52, which is significantly higher than that of OIC (0.23) and MECA (0.28). While the financial institutions index and financial markets index show similar trends, the latter appears to be significantly more developed in Saudi Arabia (0.62) compared to the two country groupings with indices of 0.13 and 0.17 for OIC and MECA countries respectively.

Chart 4.4.1: Relative Financial Sector Development in Saudi Arabia (2016) (0-1 Highest)


The size of the financial sector and its breakdown into different sectors in Saudi Arabia are shown in Charts 4.4.2 and 4.4.3. Chart 4.4.2 shows that the total financial assets are valued at SAR 4.7 trillion (USD 1.25 trillion), which is 192% of the GDP. The financial institution assets are worth SAR 2.8 trillion (USD 750 billion), constituting almost 60% of total financial assets. Chart 4.3 shows the relative size of different financial institutions in Saudi Arabia. The banking sector is dominant with 51% of the assets, followed by the pension fund (26%) and other specialized financial credit institutions (19%). The Financial Sector Development Program
Charter under Vision 2030 provides the direction of the financial sector from 2016 to 2020. The goal is to expand the size of the financial sector from SAR 4.7 trillion in 2016 to SAR 6.3 trillion (USD 1.68 trillion) in 2020.

Chart 4.4.2: Financial Sector Size in Saudi Arabia (2016) (SAR trillion)

Source: Saudi Vision Financial Sector Development Program Charter Delivery Plan 2020 (p. 14)

Chart 4.4.3: Composition of Financial Institutions in Saudi Arabia (2016) (%)

Source: IMF (2017:8)

Chart 4.4.4 shows the different sectors of the Islamic financial industry in Saudi Arabia which form a significant part of the overall financial industry in the country. Among the financial institutions, the Islamic banking sector dominates the industry with assets valued at USD 371.23 billion. The takaful sector assets are worth USD 15.12 billion, followed by other Islamic financial institutions that have assets valued at USD 13.16 billion. Sukuk forms a significant part of the sector with the value of issuances in 2016 being USD 52.55 billion and the Islamic funds industry being worth USD 20.60 billion.
4.4.2. Current Status and Projected Investments in Infrastructure Sectors

The status of infrastructure in Saudi Arabia relative to the averages of the MENA region and OIC countries is shown in Chart 4.4.5. The status of both overall infrastructure and its quality in Saudi Arabia (5.2 and 4.9 respectively) is better than the corresponding indices for both OIC and MENA countries. The same trends are observed in the case of the transport and electricity and telephony sectors with Saudi Arabia’s index scores (of 4.9 and 5.5 respectively) being higher than those in the OIC and MENA region.

Chart 4.4.5: Relative Status of Infrastructure in Saudi Arabia (2017) (1-7 Best)

Timetric reports that currently there are 111 infrastructure projects in the pipeline valued at USD 446.7 billion that are at different stages of development, ranging from announcement to
The projects related to electricity and power have the largest share, with investments valued at USD 274.8 billion followed by railway projects worth USD 90.9 billion and airports and other infrastructure at USD 72.1 billion. The projects in the water and sewerage sector are valued at USD 4.5 billion and investments for road projects amount to USD 4.4 billion.

The projected investment needs in different infrastructure sectors in terms of current trends and the projected investments needs during 2016-2040 are shown in Table 4.4.1. The total investments according to current investment trends leading to 2040 are estimated at USD 499 billion while the actual investment needs would be USD 613 billion, showing a deficit of USD 215 billion. Most of the deficits will be in building roads (with projected deficits of USD 82 billion) followed by electricity (USD 14 billion) and telecoms (USD 10 billion).

Table 4.4.1: Infrastructure Needs and Gaps Saudi Arabia 2016-2040
(Billion USD 2015 prices and exchange rates)

<table>
<thead>
<tr>
<th>Road</th>
<th>Rail</th>
<th>Airports</th>
<th>Ports</th>
<th>Telecoms</th>
<th>Electricity</th>
<th>Water</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>151</td>
<td>10</td>
<td>12</td>
<td>21</td>
<td>34</td>
<td>208</td>
<td>62</td>
<td>499</td>
</tr>
<tr>
<td>233</td>
<td>11</td>
<td>12</td>
<td>21</td>
<td>44</td>
<td>222</td>
<td>69</td>
<td>613</td>
</tr>
<tr>
<td>82</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>14</td>
<td>8</td>
<td>115</td>
</tr>
</tbody>
</table>

Source: Global Infrastructure Outlook, https://outlook.github.org/countries/SaudiArabia

4.4.3. National Level Policies and Framework of Infrastructure Development

Before the launching of Vision 2030 in 2016, various strategic decisions were undertaken for the development of some specific infrastructure sectors. For example, the National Transportation Strategy (NTS), under the Ministry of Transport, mandated in 2002 (1423H) by a Royal Decree to coordinate the development of the NTS (NTS Transport KSA, 2011). It started through an initial discussion with all concerned Ministries and agencies to identify three development phases and a consensus was reached to address the needs for the transport sector (Al Rajhi et al, 2012).

The current Saudi Arabian development agenda is driven by Vision 2030. Vision 2030 has 96 strategic objectives under the three pillars of a vibrant society, a thriving economy and an ambitious society. Strategic goals under a thriving economy include growing and diversifying the economy and investing in the long-term. Key aspects of Vision 2030 are to reduce the dependence of oil and the role of the public sector in the economy.

Traditionally, infrastructure has been funded and managed by the government either through direct procurements or indirectly by using state-owned enterprises to provide infrastructural services. The role of the private sector was recognized in 2002 when the Supreme Economic Council approved privatization procedures and transferred certain public services provided by state-owned companies to the private sector. The state-owned companies listed for privatization included infrastructure related to water supply and drainage, water desalination, telecommunications, power, air transportation and related services, railways, some sectors of roadways, postal services, seaport services, educational services, and health services. As a result of the privatization strategy, the Saudi Telecommunications Company (STC) floated

around a 20% stake on the stock market in January 2003 and raised close to $4 billion. An additional 10 percent was later offered to the private sector.

Increasingly, seeking to deliver much-needed world class infrastructure to its people, the Saudi Arabian government has recently implemented several policies to develop and finance its infrastructure. These policies and initiatives, in coherence with the vision 2030 announced in 2016 (NTP, 2016), are highlighted to ensure that it meets the ever-growing needs of its people while not dipping further into its sovereign wealth reserves which took a severe battering following the oil price crash in 2014 (Gelil et al, 2017). Vision 2030 incorporated several procedures and laws during the last few years that relate to the infrastructure sector. Some of the initiatives were to enhance the role of the private sector, including adjusting an agenda for a 15-year privatization of Saudi Arabia’s government-driven economy, utilizing private sector finance as a basic instrument, and using concession-based procurement models such as Public Private Partnership (PPP) project contracts to deliver major infrastructure projects. To enable implementation, the National Transformation Program (NTP) was initiated as the principal device for financial diversification and the National Centre for Privatization (NCP) was created by the Ministry of Economy and Planning.

As part of Vision 2030, the NCP was established to improve the role of privatization strategy and PPPs in the Kingdom of Saudi Arabia. A key feature of Vision 2030 is the Fiscal Balance Program and the increase in the role of the private sector in the economy. Although the Program intends to balance the budget and increases the role of the private sector, the government’s operational expenditures are projected to grow at a rate of 3.3% and capital expenditures will grow at a rate of 4.3% during 2018-2020. While the role of the government in infrastructure development is expected to be dominant in the future, Vision 2030 plans to increase the role of the private sector with the NCP playing a key role in implementing this goal.

In terms of infrastructure, the plan is to create, among other things, a regional logistics core within the Kingdom of Saudi Arabia with linked domestic and cross-border infrastructure. In particular, the plan intends to amplify the private sector cost contribution for the development and operation of both port projects (increasing from 30 percent to 70 percent) and rail projects (increasing from 5 percent to 50 percent). As part of this drive, the Saudi government has allocated an additional 5.5 percent of spending to infrastructure in its 2018 budget.

In order to further increase the role of the private sector, additional infrastructure sectors were identified for privatization, which included civil aviation and healthcare. For example, the General Authority for Civil Aviation (GACA) announced that it would privatize the management and operations of all 27 airports within the Kingdom by 2020, beginning with King Khalid International Airport (KKIA) in Riyadh in 2016. Other than privatization, NCP also plans to take the initiative of developing new projects using PPP. The targets of NCP will be to increase project financing using PPP in the future from zero projects in 2016 to 14 projects with expected investment targets of SAR 24-39 billion in 2020.

[64](https://www.export.gov/article?id=Saudi-Arabia-state-owned-enterprises)
Table 4.4.2: Targets of Vision 2030 in Introducing PPP Projects

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2020 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no. of PPP investments</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Total value of PPP investments</td>
<td>0</td>
<td>SAR 24-38 billion</td>
</tr>
</tbody>
</table>

*Source: Saudi Vision 2030: Privatization Program (Delivery Plan 2020).*

Initiatives of the Public Investment Fund Program (2018-2020) as part of Vision 2030 include developing infrastructure projects and undertaking certain giga-projects. The former includes investments in air transport infrastructure hubs (Developing King Khalid International Airport City in Riyadh and King Abdulaziz International Airport City in Jeddah), social infrastructure (establishing a Housing Community Development Company), and infrastructure to facilitate pilgrimage (developing the Hajj and Umrah facilities and capacity in Makkah and Madinah).

4.4.4. The Legal and Regulatory Framework for Infrastructure Investments

While Sharia is the main source of law in Saudi Arabia, many economic and financial activities are governed by legislations in the form of royal decrees, royal orders, ministerial resolutions, circulars, and resolutions by the Council of Ministers (Jaballah et al., 2018). Since the government of Saudi Arabia was the main player in the development of infrastructure in the past, the country did not have any laws related to PPP until very recently. As indicated, key features of Vision 2030 include diversifying the economy to non-oil sectors and enhancing the role of the private sector in the economy, including the infrastructure sector. In order to achieve these targets, the National Centre for Privatization & PPP (NCP) initiated the Privatization Program that has three strategic pillars.

A key strategic pillar to promote private sector involvement in infrastructure is to develop the general legislative frameworks for Private Sector Participation (PSP). The first step in this regard was the issuance of Resolution No. 665 on 8/11/1438H by the Council of Ministers which approved the Rules of Conduct of the Supervisory Committees of PSP-targeted sectors (GSA 2018). The resolution also instructed the National Centre for Privatization & PPP (NCP) to come up with a draft law that encompasses all rules governing PSP. Accordingly, NCP published a draft of the Private Sector Participation Law for public consultation to address the challenges and legislative gaps that exist in the regulatory environment for private sector involvement in the economy (Government of Saudi Arabia, 2018). When the PSP Law was finally approved in accordance with the legislative procedures, it would not prejudice the existing PSP projects or any decisions made by the Supervisory Committees. This is important in order to preserve the laws governing the land and not hinder the current infrastructure development programmes in the Kingdom. The NCP Board of Directors also issued the Privatization Projects Manual through resolution No. (2/5/2018) dated 03/08/1439H and The Rules Governing the Work of the Supervisory Committees, their Teams and Advisors through resolution No. (3/5/2018) dated 03/08/1439H.

There are laws and regulations that govern the specific infrastructure sectors in Saudi Arabia. The Electricity & Cogeneration Regulatory Authority (ECRA) (ECRA 2005) was established through Royal Decree No. M/56 dated 20th Shawwal 1426 / 22/11/2005 with the law aiming at promoting consumer-oriented electricity services and also protecting consumer rights as
stated in the act. The hydrocarbon law enacted by Royal Decree No. 4703, p. 43 dated 03/04/1439 states that all hydrocarbon deposits, hydrocarbons and hydrocarbon resources are the property of the State (KSA Regulation, 2018).

The Government Tenders and Procurement Law was enacted by Royal Decree No. M/58 dated 4th Ramadan 1427H/27/09/2006 (Bureau of Experts at the Council of Ministers) to achieve four key goals. First, to regulate the procedures of tenders and procurements carried out by the government authorities and ensure they are not influenced by personal interests in order to protect public funds. Second, achieving the maximum degree of economic efficiency in government procurements and carrying out government projects at fair and competitive prices. Third, promoting honesty and competition and ensuring the fair treatment of suppliers and contractors in accordance with the principles of equal opportunities. Finally, guaranteeing transparency in all stages of government tender and procurement procedures.

Chart 4.4.6 shows the status of the procurement regime discussed in Chapter 2 in Saudi Arabia compared to different income groupings and the MENA region. While Saudi Arabia scores high on procurement with a score of 71, which is the second best score after that of high-income countries (77), the scores for preparation (34) and contract management (33) are the lowest across all regions. Thus, there is a need to modify the law guiding the overall procurement procedure in the Kingdom to attract more domestic and foreign investors in the infrastructure sector.

**Chart 4.4.6: Procurement Regime of PPPs: Saudi Arabia (0-100 Highest)**

![Chart showing procurement regime of PPPs](chart.png)


### 4.4.4.1. Laws and Regulation Related to Islamic Finance

Article 2 of Royal decree No.23 Dated 15/12/1957 forms the charter of the Saudi Arabian Monetary Agency (SAMA). Recognizing SAMA as the central bank, the article forbids it from engaging in business based on interest. The banking law enacted by Royal Decree No. M/5 dated 22/02/1386H (11/06/1966) governs the banking sector in Saudi Arabia. Although the
law provided a framework for regulating the Saudi Arabian banking system, it does not explicitly mention anything related to Islamic banking. This banking law recognizes SAMA as the regulator of banks with the goal of safeguarding the banking system. SAMA also regulates the insurance sector in Saudi Arabia under the Law on the Supervision of Cooperative Insurance Companies (LSCIC 2003) that was approved by Royal Decree no. M/32 dated 01/08/2003. Art 1 of LSCIC states that insurance service offerings should be in accordance with Islamic law.

The Capital Markets Law was established by Royal Decree No. M/30 dated 2/6/1424H / 31/7/2003. This law establishes the Capital Market Authority (CMA) as the sole regulatory and supervisory body of the capital markets in Saudi Arabia. The CMA deals with "the organisation of financial, legal, and administrative independence and reports directly to the president of the Council of Ministers". The Saudi Arabian Stock Exchange (Tadawul) was also re-organized in light of the Capital Markets Law. The exchange was set up as a joint stock company, the shares of which are wholly owned by the Saudi government through its investment arm, the Public Investment Fund (PIF). Sukuk is regulated and governed by CMA under the 'Offers of Securities Regulations', which is a general code with no specific mention of Shariah-compliance. The regulatory guidelines cover the procedures for issuing securities and do not deal with their form and type. Thus, sukuk and bonds are regulated by the CMA using the same rules and principles.

4.4.5. The Role of Islamic Finance in Infrastructure Finance

The role of Islamic finance in the development of the infrastructure sector can be viewed in terms of how the public and private sector raises funds from Islamic financial institutions and capital markets to finance infrastructure related projects. After presenting how the government and government-linked companies in Saudi Arabia have raised funds from the Islamic financial sectors, the role of Islamic financial institutions, capital markets and international sources in financing infrastructure are examined.

4.4.5.1. Government and Government-Linked Companies

As indicated, the government plays a key role in the development of infrastructure in Saudi Arabia through budgetary allocation. The allocation of the budget and expenditures for the year 2017 is shown in Chart 4.4.7. As can be seen, the budget covers economic and social infrastructure including the education, health and transportation sectors. Since almost 85-90% of the budget of the country is financed by oil revenues, the government faces budget deficits when oil prices are low. When the oil prices declined starting in 2015, the Saudi government used funds from the reserves and also issued local and international debt instruments raising approximately SAR 200.1 billion in 2016 (Budget KSA, 2017).

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Similarly, the government raised funds by issuing bonds and sukuk in 2017 to cover its budgetary deficits. Chart 4.4.8 shows the funds raised by the Saudi Arabian government by issuing domestic and international sukuk in 2017. A total of USD 31.7 billion was raised by issuing 27 sukuk, of which over 60% (USD 19.2 billion) was domestic and the remaining (USD 12.5 billion) was international. While it is difficult to conclude how much of this went to the infrastructure sector, it can be deduced that parts of the funds from the sukuk issues were spent on infrastructure at a pro-rata basis.
A key institution that is involved in the infrastructure sector is the Public Investment Fund (PIF), the sovereign wealth fund of the country that has invested through many infrastructure-related companies. Infrastructure-related companies owned by PIF include power, water utility and sewerage (Marafiq, NWC, Saudi Electric Company), Telecommunications (Saudi Telecomm Company) and transportation (Saudi Railway SAR). While the bulk of the government-linked companies get their equity capital from the government, they can raise further funds through capital markets by issuing sukuk.

4.4.5.2. Islamic Banks

The role of Islamic banks in financing the infrastructure sector can be seen by examining the composition of the asset side of banks. Table 4.4.3 shows the asset contribution and composition of the Saudi Arabian Islamic banking sector for the Q1 2018 period. Of the total assets of SAR 596,744 billion (USD 159.131 billion), the total Shariah-compliant financing (excluding interbank financing) is SAR 397,266.7 million constituting 66.6% of the total assets. The Islamic banks held sukuk worth SAR 51,401 billion which is 8.6% of the total assets. The table shows that, of the Shariah-compliant financing, only SAR 22,332 billion (USD 5.955 billion), equivalent to 3.74% of the total assets, was used in the infrastructure sector. Among the infrastructure sectors that were financed, electricity, gas, steam and air-conditioning supply received the highest financing of SAR 11.97 billion followed by SAR 10.31 billion for transportation and storage and SAR 48.5 million for the health and social work sector. However, Islamic banks did not provide any financing for the water supply, sewerage and waste management, information and communication, and education sectors.

Table 4.4.3: Islamic Banks Assets Structural Composition and Financing of Infrastructure Sector (Q1 2018)

<table>
<thead>
<tr>
<th>Asset Composition</th>
<th>SR (million)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Shariah-compliant financing (excluding interbank financing)</td>
<td>397,266.7</td>
<td>66.6%</td>
</tr>
<tr>
<td>Sukūk holdings</td>
<td>51,401.4</td>
<td>8.6%</td>
</tr>
<tr>
<td>Other Shariah-compliant securities</td>
<td>4,935.4</td>
<td>0.8%</td>
</tr>
<tr>
<td>Interbank financing</td>
<td>38,531.6</td>
<td>6.5%</td>
</tr>
<tr>
<td>All other assets</td>
<td>104,609.2</td>
<td>17.5%</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>596,744.3</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing going to infrastructure</th>
<th>SR (million)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity, gas, steam and air-conditioning supply</td>
<td>11,973.1</td>
<td>2.01%</td>
</tr>
<tr>
<td>Water supply, sewerage and waste management</td>
<td>0.0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Transportation and storage</td>
<td>10,311.3</td>
<td>1.73%</td>
</tr>
<tr>
<td>Information and communication</td>
<td>0.0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Education</td>
<td>0.0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Human health and social work activities</td>
<td>48.5</td>
<td>0.01%</td>
</tr>
<tr>
<td><strong>Total Infrastructure</strong></td>
<td><strong>22,332.9</strong></td>
<td><strong>3.74%</strong></td>
</tr>
</tbody>
</table>

Source: (IFSB, 2018), https://www.ifsb.org/psifi_03.php

4.4.5.3. Capital Markets

As shown in Chart 4.4.9, the sukuk sector in Saudi Arabia is relatively small compared to the Islamic banking sector. The total number and value of debt and sukuk instruments during 2016 and 2017 that are listed in the CMA are shown in Chart 4.4.9. While in 2016 a total of 31 instruments were offered worth SAR 21.35 billion, in 2017 28 instruments worth SAR 86.25 billion were listed with the CMA. As noted before, the bulk of the domestic sukuk was issued by the government to finance budget deficits.
While no specific information on the proportion of the funds raised by sukuk issues going to the infrastructure sector is available, a part of the funds raised by the government is expected to be spent on the infrastructure sector on a pro-rata basis. Furthermore, a few of the government-linked companies have raised funds by issuing sukuk in the recent past. For example, in 2012, the Saudi Electricity Company raised USD 1.75 billion and the General Authority of Civil Aviation raised USD 4 billion by issuing sukuk (IIFM 2018: 34).

4.4.5.4. Social Sector

Zakat collection and distribution is the responsibility of the government and is managed by the Department of Zakat and Income Tax (Allami 2015). Zakat is disbursed through the Social Insurance Agency of the Ministry of Social Affairs but no data on the heads of disbursement is available. The legal regime for waqf in Saudi Arabia is not well developed (Tahir 2015). While there are less than 1,000 non-profit and charitable foundations or waqf in Saudi Arabia contributing only 0.3 % of the GDP, this figure is much less than the global average of 6 percent (Vision 2030: 77). Currently, only 7 percent of projects have goals of generating a social impact that is aligned with the long-term national priorities of the country. The short-term goal of Vision 2030 plans to increase the percentage of non-profit organizations that can have a measurable and deep social impact to one third by 2020. The government is planning to provide the right regulatory environment to increase the role of the non-profit sector in promoting social welfare. The case study of a health facility Centre in Alkharj, Riyadh initiated by Al Rajhi is an example of providing social services through the non-profit sector.

4.4.5.5. International Sources

As indicated, the Islamic Development Bank is the only source of Shariah-compliant financing from multilateral development institutions. Chart 4.4.10 shows that while 86 projects worth USD 1.93 billion were financed in Saudi Arabia during 1975-2016, since 2016 only three projects worth USD 119.5 million were funded by the IDB. The small number of projects are indicative of the relatively smaller quantity of funds that IDB has at its disposal to fund 57 member countries.
4.4.5.6. Case Studies

Case Study: Prince Mohammad Bin Abdul-Aziz International Airport (Madinah airport)

Madinah is a major hub for pilgrims and a designated centre for the knowledge-based industry in the country (World Bank, 2012). Prince Mohammed Bin Abdulaziz International Airport, popularly known as Madinah airport, is an international airport that serves the Madinah region, and, because of the strategic importance of the region, the airport alone cannot adequately cater for the growing numbers of passengers flying that route, mainly due to inadequate infrastructure. Therefore, Saudi Arabia’s General Authority of Civil Aviation (GACA) initiated a project to attract investors using a PPP model to rehabilitate, expand, modernize and operate the airport to international standards (World Bank, 2017). In addition, the project was designed to fulfil two objectives, namely to introduce private sector expertise and to develop a stable revenue stream for the government.

The target of the project was to expand the capacity of the airport from 5 million to 8 million passengers per year at the initial phase (Madinah Airports, 2012). The projection was to further expand it to 16 million passengers per year at the later phase. After the bidding, the TIBAH, a consortium comprising of TAV Airports Holding (Turkey), Al Rajhi Holding (KSA) and Saudi Oger Ltd (KSA), won the concession for 25 years to rehabilitate, expand and operate the entire airport (Madinah Airport, 2018). The contract was awarded and signed in October 2011 with the promise to invest $1.4 billion to build and expand a new terminal facility that could accommodate around 8 million passengers per annum (MPPA) by 2015 and 18 MPPA by the end of the concession period.

To finance the project, two modes of Islamic finance were used for the two stages involved in the project. The stages of the project are the construction and operation stage. In the construction stage, Istisna was used where a special purpose vehicle (SPV) transferred some of the rights in the build-transfer-operate (BTO) concession agreement to the TIBAH consortium, the financiers of the project. In the second stage, the TIBAH consortium transferred the ownership of the asset back to the SPV gradually based on rental payments using a lease
agreement with a put and call option for sale and purchase undertaking. The project finance structure of the project is summarised in Chart 4.4.11.

**Chart 4.4. 11. Summary of Madinah PPP Airport Project Islamic Finance Structure**

![Diagram of project finance structure](image)

*Source: World Bank (2017)*

After the completion of the construction of the assets, the complete ownership over the project's assets was transferred to the government and the commercial rights were transferred to the SPV based on the concession agreement. During the period of operations, the SPV transferred its own commercial rights based on the concession agreement of the project assets to the Islamic financiers (TIBAH group consortium). This SPV is designated as the manager of the project by default, meaning it is designated as the party responsible for the design and implementation of all the rights under the BTO concession. Based on the PPP design scheme, the financiers have to obtain direct agreement with the government authority and the SPV provider in the event that the SPV defaults.

By virtue of the direct agreements, the government authority will pay the financiers if the project is terminated because the SPV defaults. The project was successful and was delivered within the time frame. However, because of the lack of proper PPP in Saudi Arabia then, the fact that there was no central PPP Unit, coupled with the fact that it was not clear that these were high on the agenda, there were a lot of challenges facing the PPP style in Saudi Arabia. The success of the Medina project was a result of the introduction of specific resolutions by the Council of Ministers to aid in guiding the concession. Recently, the National Centre for Privatization & PPP (NCP) published a draft of the Private Sector Participation Law for public consultation to fast-track the development of the PPP model in the Kingdom. This will guide the future financing of projects through PPP.

Key selection criteria included meeting or exceeding minimum technical and operational requirements, financial commitment, and adherence to best practices in energy and environmental practices and modern design that reflect Madinah’s historic and religious importance. Interest in the project was strong with 10 international, regional and local firms
submitting qualification applications and four consortia ultimately submitting bids. The winning consortium, TIBAH, consisted of TAV Holdings of Turkey and Al Rajhi Holding Group and Saudi Oger from Saudi Arabia. The agreement was signed on October 29, 2011 (Oger Telecom Limited, 2018). IFC’s involvement continued until the financial close of the project. The funding bodies were Saudi British Bank (SABB), Arab National Bank (ANB), National commercial bank (NCB) and Sumitomo Mitsui Banking Corp who all invested $296M, $316M, $296M and $296M respectively (Caselli et al, 2015).

Case Study: Rehabilitation of the Disabled Centre in Alkharj (Riyadh, KSA) by Al Rajhi

In order to support the health services and treatment of those in need, AlRajhi Endowment introduced the broad concept of charitable work to contribute to the health sector through waqf (Al-jazirah.com, 2016). The waqf took steps to establish rehabilitation centres and supply medical equipment as well as offer medical devices to the needy across Saudi Arabia and other Islamic countries. The main objectives of the Alrajhi Endowment medical projects are summarised as follows (Alrajhi Endowment, 2018):

- Support the relevant authorities in the country with regards to health services in other areas where medical centres or devices are needed.
- Provide support both financially and in-kind to the patients through the establishment of health care centres in the areas in need of such services.
- To participate actively in other parts of the Alrajhi Endowment in order to realize the principle of solidarity and cooperation among Muslims.

In line with these objectives, Alrajhi Endowment established care and rehabilitation centres for the disabled in collaboration with the Ministry of Social Affairs in Riyadh, Saudi Arabia. The target was to provide disabled people and others who are in need of such support with medical devices ( Alrajhi Endowment KSA, 2016). The project was carried out at the Sheikh Saleh ibn Abdulaziz Alrajhi Centre for the rehabilitation of the disabled in Alkharj (Riyadh, KSA).

The rehabilitation centre comprised 3 buildings which cover an area of land of approximately 15,000 m². It was targeted to initially accommodate a total of 400 beds, the capacity of which could be expanded later. The total cost of the construction was estimated to be around SAR 20 million. To finance this project, the social sector (waqf) was used, and the mode of financing this project was through donations. The Alrajhi Endowment coordinated with a number of medical and social agencies and charities in various regions of the Kingdom to start a program termed the "Aoun disability program" to provide medical devices for people with disabilities.

Through this initiative, the proposal by the Ministry of Awqaf was initiated to provide different medical devices to fulfil the needs of some registered patients. These kinds of services normally go straight to the beneficiaries in conjunction with the charitable and medical organizations. This has been of great help to people with disabilities to facilitate their health needs.

4.4.6. Conclusion and Recommendations

The announcement of Vision 2030 was a clear and decisive shift by the Saudi government signalling its belief that private sector participation in the future development of its much-needed "mega" infrastructure projects was set to increase significantly. While traditionally the
government has been involved in the infrastructure sector of the country, under the Vision 2030 the plans are to use the private sector to contribute to infrastructure development. Given the financing gap for infrastructural development, Islamic finance can play an important role.

While the Islamic banking sector represents more than 50% of the overall banking assets, the contribution to the infrastructure sector has been only 3.7%. As indicated, this can be explained by the nature of liabilities and the capital adequacy regulatory regimes. Since Islamic banks are relatively large in Saudi Arabia, one option of increasing investments in infrastructure projects would be to arrange syndicated financing whereby a few banks can contribute the funds so that the risks are spread. The case study of Madina airport in which several banks contribute shows the way in which different parties can contribute to the development of infrastructure projects.

The government has issued several sukuk to raise funds to cover budgetary expenses. Some infrastructure-linked GLCs such as Saudi Electricity Company have also issued sukuk to expand their operations. The Islamic social sector can also be revived so that they can contribute to the provision of social infrastructure services.

Since there is a change in the funding approaches from the public sector to the private sector under the 2013 vision, the sukuk market is expected to play a more important role in raising funds for the infrastructure sector. However, encouraging the private sector to contribute more to the infrastructure sector under Saudi Vision 2030 would require strengthening the PPP regime by especially introducing a PPP-specific legislation framework in the Kingdom to enable PPP projects to be delivered outside the existing procurement framework.

Table 4.4.4 shows the issues and the recommendations to further enhance the role of Islamic finance in infrastructure development in Saudi Arabia.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure-Related Strategies and Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The government plans to increase the role of the private sector to develop the infrastructure sector. The Islamic financial sector can contribute to this effort.</td>
<td>• Develop Shariah-compliant contract templates that can be used for different types of PPP projects and make these available to potential Islamic investors.</td>
<td>• National Centre for Privatization (NCP)</td>
</tr>
<tr>
<td>• Since infrastructure projects are complex and long term, there is a need to provide guarantees to project specific risks to encourage private sector participation in infrastructure investments.</td>
<td>• Provide guarantees and insurances to cover risks such as political risks and partial credit risks in a Shariah-compliant manner to create incentives for the private sector to invest in infrastructure projects.</td>
<td>• Relevant public bodies</td>
</tr>
<tr>
<td>• Saudi Arabia does not have specific Islamic financial laws. Islamic banking operates under a traditional banking law, the takaful sector operates under cooperative insurance law and the Capital Markets Law does not have any specific mention of sukuk.</td>
<td>• Enact Islamic financial (banking, takaful and capital markets) laws to provide a sound legal and regulatory basis for the development of the Islamic financial industry.</td>
<td>• Relevant government ministries</td>
</tr>
<tr>
<td><strong>Legal and Regulatory Regimes</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4.4: Issues and Policy Recommendations: Saudi Arabia
<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Islamic banks contribution to infrastructure development can also be increased by jointly funding the projects with other banks through syndicated financing.</td>
<td>• Create a sound legal and contractual framework for syndication to increase the participation of Islamic banks in infrastructure projects along with other banks.</td>
<td>• Relevant government ministries</td>
</tr>
<tr>
<td><strong>Islamic Financial Institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• One reason for the small direct investments in infrastructure sector by Islamic banks is likely due to their liquid and short-term liabilities structure.</td>
<td>• Introduce and expand the size of restricted investment accounts which can be used for longer-term investments.</td>
<td>• Banking regulators • Islamic banks</td>
</tr>
<tr>
<td>• The contribution of the Islamic nonbank financial institutions in Saudi Arabia can be enhanced by increasing the share of investments in the infrastructure sector.</td>
<td>• Increase the takaful companies’ investments in infrastructure projects. • Enhance the Shariah-compliant share of the pension funds and sovereign wealth to expand the contribution of Islamic finance in infrastructure development. • Develop Islamic funds/ banks for infrastructure investments to further increase the share of Islamic finance in infrastructure investments. The national level institution will be able to pool funds from different sources for investments in infrastructure projects.</td>
<td>• Islamic nonbank financial institutions • Relevant public bodies • Islamic investment banks</td>
</tr>
<tr>
<td><strong>Islamic Capital Markets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Infrastructure financing and sukuk structures are complex.</td>
<td>• Establish an advisory GLC that can advise on the issuance of sukuk and develop templates for issuing sukuk for infrastructure projects.</td>
<td>• Capital markets authority. • National Centre for Privatization (NCP)</td>
</tr>
<tr>
<td>• Issuing sukuk for projects instead of bonds has the potential to increase the investor base as both Islamic and conventional financial institutions can invest in these securities.</td>
<td>• Develop market and infrastructure for an efficient Islamic capital market/sukuk. • Issue more sukuk by both public and private sector entities for infrastructure projects.</td>
<td>• Capital Markets Authority • Issuers (sovereign and corporates) • Financial institutions</td>
</tr>
<tr>
<td>• To expand the investor base, retail sukuk can also be issued in Saudi Arabia.</td>
<td>• Issue retail sukuk • Introduce financial literacy programs to increase the literacy of Islamic finance • Introduce efficient mechanisms for the delivery and redemption of sukuk issues.</td>
<td>• Capital markets authority • Issuers (sovereign and corporates) • Financial institutions</td>
</tr>
<tr>
<td><strong>Islamic Social Sector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Vision 2030 emphasises the role of the non-profit sector in achieving developmental goals.</td>
<td>• Increase the role of the social sector in providing infrastructure services such as health and education by providing a supportive legal framework under which innovative models of zakat and waqf can develop.</td>
<td>• Relevant government ministries</td>
</tr>
</tbody>
</table>
4.5. Sudan

4.5.1. Sudanese Financial Sector and Islamic Finance: An Overview

Although the Islamic finance and banking industry started in Sudan during the Economic Openness Period (EOP) which took place over 1976-1983, the Islamization of the whole banking and financial system was completed in two stages. The first was the *Stage of Declaration and Starting of Islamic Banking* which started in October 1984 and continued until the end of 1988. During this stage, the Civil Transactions Act of 1984 was enacted after the declaration of Shari’ah law in 1983. Consequently, the Central Bank of Sudan (CBOS) issued the circular in December 1984 that prohibited interest rates and instructed all banks to convert from conventional banking to Islamic banking immediately (Abushora et. al 2006). During this period, the whole banking system completely transformed to Islamic and many private Islamic financial institutions entered the market. The second *Stage of Deepening Islamic Financial System* took place during the period 1989-2003 in parallel with the Sudan Government’s Privatization Policy, often termed The Economic Liberalization Policy. This stage witnessed the Islamization of insurance companies, the merging of government banks, the liquidation of private banks, and the emergence of Islamic investment banks. The period also witnessed the emergence of the Khartoum Stock Exchange (KSE) in 1994 immediately after the issuance of the KSE Act of 1994 (Abushora et. al 2006). Soon after the KSE Act of 1994 was issued, the primary stock market started operations in the same year and the secondary stock market started in 1995 with 34 listed companies (Al-Sayed, 2011).

Different stakeholders and institutions in the Sudanese financial sector include Islamic banks; the Electronic Banking Services Company; the Credit and Information Scoring Agency; the Khartoum Stock Exchange; and nonbanking financial institutions such as Islamic insurance companies, Investment brokerage companies, the Deposits Guarantee Fund, the Inter-Banks Liquidity Management Fund, investment institutions, exchange bureaus, Ijarah companies and microfinance institutions. The status of Sudan's financial sector relative to the averages of OIC countries and the African region is shown in Chart 4.5.1. The overall financial development index of Sudan (0.11) is lower than the corresponding indices for OIC (0.23) and Africa (0.16), implying a relatively underdeveloped financial sector. The same trends can be seen in the case of the financial institutions index (0.21) and the financial markets index which for Sudan is zero.
Infrastructure Financing through Islamic Finance in the Islamic Countries

Chart 4.5.1: Relative Financial Sector Development in Sudan (2016) (0-1 Highest)

Source: IMF Financial Sector Development Database

Chart 4.5.2 shows the composition of the Sudanese financial sector including banks, insurance companies and capital market value. The financial sector is dominated by banks with assets worth SDG 211.2 billion (USD 11.765 billion), representing 92.8% of the total size of Sudan’s financial sector. The total Islamic banking assets of 37 specialized, commercial, banks in Sudan increased by 10.5% from USD 10.651 in 2014 to USD 11.765 billion in 2017 (CBOS, 2017).

Chart 4.5.2: Islamic Financial Sector Composition Sudan (2017) (SDG billion)


The capital markets that include the stock market, Sukuk, and investment funds market is valued at SDG 11.2 billion (USD 625.84 million) and represents 4.9% out of the total size of the financial sector. The capital market, however, is dominated by sukuk valued at SDG 10.396 billion (USD 578 million), representing 92.5% of the capital markets, and the remaining 7.48%, constituting stock market capitalization of SDG 841 million (USD 46.84 million). Furthermore, trading in sukuk in KSE is dominated by Government Musharakah Certificates (GMCs), which represent approximately 80% of their traded value (KSE, 2014).
The insurance sector is the lowest with a total asset value of SDG 5.2 billion representing 2.3% of the total financial sector value. Fifteen insurance companies operating under the supervision of the Insurance Supervisory Authority (ISA) in the country comprise nine, general non-life insurance companies, four composite (general and life) insurance companies, and two reinsurance companies (BOK, 2016).

4.5.2. Current Status and Projected Investments in Infrastructure Sectors

The World Bank (WB) in its global rankings 2018 ranked Sudan number 121 out of 160 countries based on the Logistics Performance Indicator 2018 (LPI). Based on the LPI criteria, Sudan had a moderate rate of only 2.2 in infrastructure compared to Germany, which had the highest rate in the world of 4.2 (TWB, 2018). Based on the index system and evaluation model of the Chinese Economic Report Series 2014, Sudan ranks 92 out of 133 countries (Jianping et al. 2014).

Sudan has invested in infrastructure during the last few decades. Power generation capacity has tripled from 1,000 MW in 2005 to 4,000 MW in 2012. Sudan has the capacity to be a major exporter of hydropower if additional facilities are improved and links to other Nile Basin countries are established. Sudan has made progress in liberalizing the Information Communication Technology (ICT) sector and has succeeded in attracting substantial amounts of domestic and foreign private capital (AfDB, 2016). However, Sudan’s most pressing infrastructure challenges remain in the water and transportation sectors as most of Sudan suffers from insufficient access to clean sources of water and access to sanitation (Ranganathan, Garmendia, 2011).

### Table 4.5.1: Development Expenditures for Proposed Infrastructure Programs 2014-2030 (In USD million at 2012 prices)

<table>
<thead>
<tr>
<th>Program</th>
<th>Medium-term 2014-2020</th>
<th>Long-term 2021-2030</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td>3,346</td>
<td>5,985</td>
<td>9,330</td>
</tr>
<tr>
<td>Railways</td>
<td>1,945</td>
<td>1,698</td>
<td>3,643</td>
</tr>
<tr>
<td>Ports</td>
<td>410</td>
<td>611</td>
<td>1,020</td>
</tr>
<tr>
<td>Civil aviation</td>
<td>153</td>
<td>297</td>
<td>450</td>
</tr>
<tr>
<td>Transport Sub-total</td>
<td>5,853</td>
<td>8,590</td>
<td>14,444</td>
</tr>
<tr>
<td>Power</td>
<td>6,380</td>
<td>8,043</td>
<td>14,423</td>
</tr>
<tr>
<td>Water resource supply</td>
<td>600</td>
<td>1,400</td>
<td>2,000</td>
</tr>
<tr>
<td>Domestic water and sanitation</td>
<td>5,160</td>
<td>11,317</td>
<td>16,477</td>
</tr>
<tr>
<td>Irrigation</td>
<td>800</td>
<td>2,200</td>
<td>3,000</td>
</tr>
<tr>
<td>ICT</td>
<td>324</td>
<td>300</td>
<td>624</td>
</tr>
<tr>
<td>Total</td>
<td>19,117</td>
<td>31,851</td>
<td>50,967</td>
</tr>
</tbody>
</table>

Source: AfDB (2016: 169)

Table 4.5.1 shows the total investment needed for the achievement of the proposed program of development for the infrastructure sectors in the medium term (2014-2020) and long-term (2021-2030). The total estimated funding requirements over the period is close to USD 51 billion. USD 14.4 billion of it is for transportation and the power sector needs USD 14.4 billion. The water and sanitation services need USD 16.5 billion and water resource supplies and irrigation development need USD 2.0 billion and USD 3 billion respectively.

The average annual expenditure on infrastructure development is expected to be USD 2.7 billion per year for the 2014-2020 period, and USD 3.2 billion per year for the 2021-2030 long-
term period. The African Development Bank Group estimates that the total public and private investments in infrastructure in the Moderate Growth scenario would increase from 2.3% of non-oil GDP in 2012 to 3.7% in 2018 and then decline steadily to only 2% of non-oil GDP by 2030 (AfDB, 2016: 173). The African Development Bank estimates that to fill the infrastructure financing gap, investments in the sector have to triple and increase to 7-8% of GDP in Sudan (AfDB 2016: 143, 173)

4.5.3. National Level Policies and Framework of Infrastructure Development

Over the past decades, Sudan’s economy has been, exposed to numerous shocks and consequently instabilities in its economic growth. The most recent one was the separation of South Sudan in 2011 which has resulted in the loss of 75% of the former Sudan’s oil output. The Government has formulated plans to achieve economic diversification and create new revenue sources such as escalating the remaining oil and gas production, gold mining, and agricultural production (ALN, 2015).

The weak competence of the state Government institutions, together with the inadequate infrastructure base has reduced the government’s capability to articulate and execute efficient macroeconomic improvements and stable economic policies. This situation has had negative impacts on infrastructure development and economic diversification (UNDP, 2013).

The National Conference for Economic Salvation (NCES) of 1989 recommended the foundation of a High State Committee to evaluate the performance of the State-Owned Enterprises (SOEs) and create certain policies, procedures, and road maps to reform them and improve their performances. The NCWS has also asked the state government to not get involved in controlling economic activities as a prerequisite cornerstone for privatization and economic liberalization. The implementation of the Comprehensive National Strategy for Economic Development (CNSFED) in 1992 included a strict stabilization program and the control of public expenditures. It privatized the telecommunications sector and some of the SOEs, including some government banks and financial institutions, and floated the exchange rate (AfDB, 2016).

Infrastructure development has been a key element of Sudan’s National Strategic Plan and the Five-Year Plans. During the First Five-Year Plan (2007-2011), Sudan invested SDG 5.4 billion in infrastructure development as total government spending on infrastructure which was 27% of the total government expenditure. Transportation, water supply and sanitation, electricity, and communication networks were the main fields. Nevertheless, the whole country’s infrastructure development needs exceeded the government’s budget capacity. After the secession of South Sudan in 2011 and the decrease in oil revenues, the government started having deficits in budget beginning in 2012. The deficit was SDG 4.4 billion in 2014 (Yesuf, 2017) and reached SDG 14.3 million in 2017 (CBOS, 2017).

As a part of the Sudan Strategy (2007 - 2032), the Five-Year Program for Economic Reform (2015-2019) was launched under the slogan ‘Production for export and improved standard of living’. The five-year program includes infrastructure development as one of the building blocks of the program. The program aims to rehabilitate and expand infrastructure with a particular focus on electricity, railway, irrigation, as well as the completion of existing roads, bridges and subways that connect the production areas with local markets and export outlets for global markets (MFNE, 2015).
The Five-Year Program for Economic Reform (2015-2019) includes strategies for the development of PPP arrangements in different sectors. The Program’s purpose is to expand production and exports; and to increase living standards, giving an essential role to the private sector. Total private sector investments as per the program are expected to account for 83.4% of total investment requirements. The Program has identified different socioeconomic pillars, and among them are infrastructure development and the PPP framework (GPFEDC, 2016).

4.5.4. Legal and Regulatory Framework for Infrastructure Investments

The Sudan Land Settlement and Registration Act 1925 (LSRA 1925) set up a land registry and outlines the terms of the acquisition of privately or publicly owned land. Based on this law, land can be leased devoid of any limitations on the leasing value and the maturity of the leasing contract (ALN, 2015). Based on the LSRA 1925, foreign investors are allowed to get lands through the National Investment Authority (NIA) for their investment project or through approval by the Council of Ministers (UN, 2015). The Investment Encouragement Law 2013 makes state governments liable for confining, registering, planning, mapping, and issuing information defining the existing lands for agricultural, industrial and service projects.

Since the government plays a key role in the development of the infrastructure in Sudan, the legal framework for private sector participation has not developed. Although there is no codified Public Private Partnership (PPP) law, there have been a few infrastructure projects that have been implemented using PPP. Examples of infrastructure projects structured as PPP are shown in Table 4.5.3. Three projects, namely the Juba Port Franchise, Omdurman Water Treatment Plant and Kanartel were initiated in the 2000s with investments worth USD 310 million (PPPLRC, 2017).

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Sector</th>
<th>Year</th>
<th>Investment (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kanartel</td>
<td>ICT</td>
<td>2004</td>
<td>159.00</td>
</tr>
<tr>
<td>Omdurman Water Treatment Plant</td>
<td>Water and sewerage</td>
<td>2007</td>
<td>120.70</td>
</tr>
<tr>
<td>Juba port concession</td>
<td>Ports</td>
<td>2006</td>
<td>30.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>309.70</strong></td>
</tr>
</tbody>
</table>


Sudan has recently formed a PPP unit (World Bank 2018) and has launched its first PPP initiative with the World Bank in January 2017. A grant from the Public-Private Infrastructure Advisory Facility (PPIAF) will be used for the PPP Support Program to reinforce the policy and regulatory environment and framework for PPPs in Sudan (World Bank 2017).

The status of the procurement regime in Sudan relative to other income groupings and the Sub-Saharan African region is shown in Chart 4.5.3. The chart shows that Sudan has an overall weak procurement regime with all stages of preparation, procurement and contract management even when compared to low income groups and the Sub-Saharan region. Since the stage of preparation is the most important part of any procurement process, a low score of 17 is indicative of the weakest part that can prevent the initiation of infrastructure projects. The scores of all the stages of the procurement regime in Sudan are lower than the averages of OIC member countries.
The whole financial sector of Sudan is Islamic. Thus, the legal and regulatory framework is highly supportive of Islamic finance and the banking industry. Different laws have been codified to support the Islamic financial industry. The Bank of Sudan Act 2002 amended 2002 and 2006 define the main role and objectives of CBOS as being to regulate and supervise banks with full adherence to Islamic Shari’ah principles (BOS Act, 2012). The Banking Business Act 2003 (BBA 2003) stipulates the rules and bank licenses, and it states the minimum capital, reserves, provisions, etc. It defines the accounting and disclosure. It authorizes CBOS to inspect banks and financial institutions. The BBA 2003 founded the Higher Shari’ah Supervisory Board (HSSB) as the higher body that monitors the implementation of Shari’ah Standards.

While the insurance system in Sudan was completely transformed to the Islamic system in 1992, the legal framework was formalized for the sector with the enactment of the Insurance and Takaful Act 2003 (IT Act 2003). In the IT Act 2003, Takaful distinguishes between life insurance and general insurance, (IMF, TWB, 2005). There are other laws indirectly related to the Insurance and Takaful system in Sudan. The Road Traffic Act of 1983, the Civil Transactions Act of 1984, and the Money Laundering and Terrorism Financing Act 2014 (ML & TF Act) also indirectly related to the Insurance and Takaful system in Sudan. Insurance and Reinsurance Companies in Sudan are regulated by the Insurance Regulatory Authority (ISA) which, in turn, are supervised by the Minister of Finance and National Economy. One of the main roles of the ISA is to issue Insurance or Reinsurance licenses. It is also prohibited to register any business firm in the Commercial Registrar General (CRG) before obtaining the interim approval of the Board of Directors of the ISA.

Capital markets are governed by the Khartoum Stock Exchange Act of 1994 (KSE ACT 1994) and are regulated by the Financial Markets Regulation Authority Act of 2015 (FMRA Act 2015). KSE operates on the basis of Islamic Shariah. It organizes and supervises the issuance of securities; raises capital; and encourages savings and investment in securities, Sukuk, and the government investment certificates (GICs). The legal framework of the capital markets is also
supported by other related laws such as the Sukuk Act of 1995 (SA, 1995), the Civil Transactions Act of 1984 (CT Act 1984), and the Money Laundry (ML) & Terrorism Financing (TF) Act of 2014. The taxation system in Sudan supports the sukuk market. The profit taxation of all kinds of GICs, Sukuk, and any other financial investment instruments is completely exempted based on the Sukuk Act 1995, clause number (20/a) (Sukuk Act, 1995).

4.5.5. Role of Islamic Finance in Infrastructure Finance

The bulk of the infrastructure investments in Sudan have been done by the government. However, government revenue has been stressed after the secession of South Sudan in 2011. While the revenue for oil was 10-11% of GDP while non-oil revenues accounted for 7% of GDP, after the secession the oil revenue fell to below 2% of GDP (in 2013-2014) and non-oil revenue increased to around 10% of GDP. The result was that public revenue dropped from 17% of GDP in 2005 to 10-11% in 2012-2014 (AfDB 2016: 47). This called for the generation of funds from other sources including the private sector. Since the whole financial sector in Sudan is Islamic, any funds raised from the private sector for infrastructure development would be Shariah-compliant.

Providing finance for infrastructure can thus be made directly by banks and other financial institutions or through different Islamic financial instruments such as sukuk. For the latter, Islamic financial institutions can invest in government-issued sukuk and the GICs.66 These instruments are listed and traded in KSE and some are also traded between banks. The role of different stakeholders in infrastructure investments is discussed below.

4.5.5.1. Government Linked Companies (GLCs)

A feature of infrastructure development in Sudan is that projects are financed through joint-ventures between the government, local and external government, and private sector entities. This is done through establishing companies that are directly controlled by the government. An example of a government-linked company (GLC) is Sudatel which is the main telecommunications and internet service provider in Sudan. It was one of the first SOEs that was privatized in the early 1990s as part of the Government National Privatization Policy. The Telecommunications Liberalization of the sector began in the early nineties as part of the national privatization policy. The aim of the privatization of the telecommunication sector was to overcome the lack of efficiency and productivity and to renovate the country’s communication setup through the enabling of a private sector share.

Sudatel is in charge of the construction and maintenance of Sudan’s telecom infrastructure. The company has more than 60% shares owned by the Sudan government and the rest of stocks belong to private individuals and corporate interests. It has been listed in the KSE since the 1990s and in the Abu Dhabi Stock Exchange since 2003 (KSE, 2017). Sudatel holds stocks in different ICT companies such as Arab Cables with a 40% share, Thurya Mobile Phone Service, Rascom, Sudanet with a 51% (between 2005 and 2007, it managed to acquire 100% of Sudanet), Datanet (Sudan) with 99% share, Hawatif Corporation, Expresso Telecom, and Sudani One.

66 These Sukuk & GICs are issued through the Sudan Financial Services Company (SFSC), which is a limited liability Company owned by CBOS and the Ministry of Finance and National Economy based on a 99% capital share to CBOS and 1% to the Ministry.
4.5.5.2. Islamic Financial Institutions

Chart 4.5.4 shows the banks’ direct and indirect financing for the infrastructure sector in Sudan. Out of a total assets of SDG 211.246 billion, an investment of SDG 5.795 billion (2.7% of the total) was made in the transportation and storage sector and an SDG 2.279 (1.1% of the total) investment was made in the mining and energy sector. The banks held government sukuk and GICs worth SDG 11.126 billion, constituting 5.3% of total banking assets. The issuer of government sukuk and GICs, the Sudan Financial Services Company (SFSC), claims that the funds raised are invested in infrastructure and development project financing such as health projects, hostel construction, river transportation, railways, and other infrastructure projects in Sudan’s regional States (SFSC, 2018). Thus, the bulk of the banks’ infrastructure financing is done indirectly through sukuk and GICs, which represent 58% of the total bank infrastructure financing. It should be noted that while the direct financing by banks in the infrastructure sector is illiquid, the indirect financing through sukuk and GICs makes the investments liquid since these instruments can be sold on the stock exchange.

Chart 4.5.4: Bank Infrastructure Financing: Sudan (2017) (SDG million)

The direct investments in the infrastructure sector by Sudanese banks in Q1 2018 are shown in Table 4.5.3. The results in the table confirm those reported in Chart 4.5.4, showing that only 3.59% of the total assets are invested in the infrastructure sector.
Table 4.5.3: Islamic Banks Asset Structure and Financing of the Infrastructure Sector in Sudan (Q1 2018) (SDG million)

<table>
<thead>
<tr>
<th>Asset Composition</th>
<th>SDG (Million)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Shariah-compliant financing (excluding interbank financing)</td>
<td>119,122.0</td>
<td>40.5%</td>
</tr>
<tr>
<td>Sukūk holdings</td>
<td>20,467.0</td>
<td>7.0%</td>
</tr>
<tr>
<td>Other Shari‘ah-compliant securities</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Interbank financing</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>All other assets</td>
<td>154,315.0</td>
<td>52.5%</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>293,904.0</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing going to infrastructure</th>
<th>SDG (million)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity, gas, steam and air-conditioning supply</td>
<td>1,788.0</td>
<td>0.61%</td>
</tr>
<tr>
<td>Water supply; sewerage and waste management</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Transportation and storage</td>
<td>8,765.0</td>
<td>2.98%</td>
</tr>
<tr>
<td>Information and communication</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Education</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Human health and social work activities</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total infrastructure</strong></td>
<td><strong>10,553.0</strong></td>
<td><strong>3.59%</strong></td>
</tr>
</tbody>
</table>

Source: IFSB Prudential and Structural Islamic Financial Indicators

Chart 4.5.5 shows the distribution of assets for the insurance sector in Sudan. Lands and real estate investments represent 43.7% out of the total insurance sector investment portfolio in 2017 while stocks, Sukuk, and bank deposits represent 14.9%, 8.2%, and 29.6% respectively in the same year. This means that 96.4% of the insurance investment portfolio is invested in liquid assets. Although this kind of investment diversification is healthier for the insurance sector and strengthens its consolidated balance sheet, freezing this huge fund in liquid assets rather than employing it in reshaping the distribution of general insurance to serve the real economic sector lessens the contribution of the insurance sector to the national economy.

Chart 4.5.5: Distribution of Insurance Sector Investments in Sudan (2017) (%)

Source: Insurance Supervisory Authority (ISA), Annual Report 2017
4.5.3. Capital Markets

Capital markets contribute in financing the infrastructure sector through infrastructure corporations, sukuk and GICs listed and traded on the KSE. Chart 4.5.6 shows the sector-wise market capitalization of KSE listed companies that have a total value of SDG 19.837 billion. While the banking sector dominates the market with almost 64% of the share, the telecommunication and investment & development belonging to infrastructure sub-sectors ranked second (24.4%) and third (3.9%) respectively.

Chart 4.5.6: Market Capitalization of Listed Companies Categorized according to Sector (2017) (%)

Source: KSE Annual Report 2017

4.5.4. International Sources

Shariah compliant funds from international sources are provided by IDB. Chart 4.5.7 shows the project financing that Sudan received from the IDB since its inception in 1976. While 100 projects worth USD 1.185 billion were funded during 1976-2016, two projects valued at USD 21.5 million have been financed since 2016.

Chart 4.5.7: Number of Projects and Financing from IDB: Sudan (USD million)

Source: https://isdbdata.github.io/monograph2017.html
4.5.5.5 Case Studies

Case Study: The Government Musharakah Certificates (GMCs) (Shahama)

Shahama is an Islamic Sukuk issued by the Central Bank of Sudan and the Ministry of Finance and National Economy (MFNE) through the Sudan Financial Services Company (SFSC). SFSC is considered an SPV in charge of issuing and Marketing Shahama Sukuk on behalf of the CBOS and MFNE. The main objectives of Shahama are to manage and control liquidity at the macroeconomic level through open market operations and fill the government budget deficit. It satisfies all the conditions of legal contracts and is approved by the Higher Shari’ah Supervisory Board (HSSB). Shahama has low risk because it is supported by real government assets and GLCs such as Sudatel, the Sudanese Company for Petroleum Pipelines, Hilton Hotels, Ariab Mining, Giad Motorcar, etc. The structure of the Shahama sukuk is shown in Chart 4.5.8.

Shahama is issued quarterly and structured as a musharakah investment instrument between the holder as rab Al-Mal and the issuer as mudarib (BOK, 2016). It is valued at SDG 500 for each certificate and the maturity of Shahama is one year. It yields a high profit rate compared to other investment alternatives and there are no limits on the number of certificates that can be bought. It is also considered by banks to be a liquid security against which they can grant their holders credit financing lines because it can be easily liquidated in KSE (IIFM, 2010).

**Chart 4.5.8: Structure of the Government Musharakah Certificates (GMCs) Shahama**

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The majority of investors of Shahama are local since there is an obvious absence of foreign investors. Although there are more than three GICs listed in KSE, Shahama is the most active one. In 2017, 41 million Shahama certificates were sold on the KSE with a total value of SDG 20,504 million and an average profit of 16.1% compared to 41.2 certificates with a total value of SDG 20,555.2 million and an average profit of 17% in 2016 (CBOS, 2017).

Out of the SDG 14,314 million actual deficit in the government budget in 2017, the Shahama-financed SDG 3,278 million represents a 23% contribution percentage compared to 19.3% in 2016 with a total amount of SDG 2,109 million out of the net actual budget deficit of SDG 10,918 million (CBOS, 2017).
Case Study: The Government Investment Sukuk (GISs) Sarh

The Government Investment Sukuk (Sarh) is a Shari'ah-based financial instrument issued by the Ministry of Finance and National Economy (MFNE) on behalf of the Sudan Government. It is managed and marketed on the KSE through the SFSC. The proceeds of these Sukuk are used for financing the infrastructure of the various states of Sudan. The main objectives of Sarh are to gather national and regional savings, encourage investment, manage liquidity at the macroeconomic level across open market operations, develop the local capital markets, employ savings in the development and infrastructure projects, and reduce inflationary effects by providing financing to the state government supported by real assets (Yousif, 2015).

The Sarh Sukuk structure comprises three parties: Sukuk holders (investors), SFSC (mudarib), and the MFNE (applicant of finance). Sarh represents real assets under various contracts (ijarah, murabahah, istisna, and salam). The relationship between sukuk holders and SFSC is based on mudarabah contract where the investors are rab al-mal and SFSC is the mudarib. The contract between the Ministry and the SFSC is based on various legal contracts identified in Chart 4.5.9. The profit of the invested funds is determined by the total returns of the investment contracts and the profit shares of the mudarabah contract distributed every three months based on a share of 92% going to the rab al-mal (the investor) and 8% to the mudarib (SFSC). Sarh can be easily liquidated on the KSE and is considered by banks to be a liquid security (Yousif, 2015). In 2017, 8.1 million Sarh Sukuk were sold on the KSE with total value of SDG 819.5 million compared to 9.2 million Sukuk with a total value of SDG 8.2 million in 2016 (CBOS, 2017).

Out of the 14,314 million actual deficit in the government budget in 2017, Sarh financed SDG 163 million, representing only a 1.13% contribution percentage compared to 2% in 2016 with a total amount of SDG 206 million out of the net actual budget deficit of (SDG 10,918 million) (CBOS, 2017).

Chart 4.5.9: Structure of the Government Investment Sukuk (GISs) Sarh

Source: Authors own.
Case Study: Sudan Financial Services Company Ltd.67

The Sudan Financial Services Company Ltd. (SFSC) was established by the Central Bank of Sudan (CBOS) and the Ministry of Finance and National Economy (MFNE) in 1998 with an ownership of 99% and 1% of shares respectively. The vision of the SFSC is to work towards achieving sustainable economic and social development through the provision of Islamic financial services, stable and distinguished and satisfies the desires of the society. The objectives of SFSC include the 'promotion and diversification of financial services and financial products in accordance with Shariah rules; design and execute a marketing policy that can absorb the requirements of present as well as potential clients; promotion and training of staff on recent developments regionally and internationally in the area of financial services and related technology; and adoption of modern systems and technology and achieve the adequacy and efficiency of the financial and administrative performance of the company with discipline and speed.'

The key functions of SFSC are to provide 'financial services related to management, dealing in the shares and allocation owned by the government of the Sudan, its corporations and institutions through the issue of sukuk in accordance with Shariah'. The SFSC has developed sukuk and Government Investment Certificates (GICs) that have raised funds of more than SDG 1 billion that has helped finance development projects including infrastructure in the country. The Shariah-compliant certificates issued by SFSC on behalf of different stakeholders is shown in Table 4.5.4. As can be seen, during 2016, SFSC helped with the issuance of SDG 23.631 billion of certificates with SDG 20.559 billion of GMCs, SDG 2.242 billion of Shasha, and SDG 829 million of Sarh.

Table 4.5.4: Issuance of Shariah Compliant Certificates by SFSC (2016) (SDG million and %)

<table>
<thead>
<tr>
<th>Investors</th>
<th>Government Musharakah Certificate (GMCs) SDG Million</th>
<th>% of total</th>
<th>Government Investment Certificates (GIC/Sarh) SDG Million</th>
<th>% of total</th>
<th>Sudan Company for Electricity Distribution Ijarah Certificate (Shasha) SDG Million</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CBOS</strong></td>
<td>2,197.2</td>
<td>10.7%</td>
<td>327.3</td>
<td>39.5%</td>
<td>46.9</td>
<td>2.09%</td>
</tr>
<tr>
<td><strong>Banks</strong></td>
<td>9,805.5</td>
<td>47.7%</td>
<td>219.9</td>
<td>26.5%</td>
<td>1,352.1</td>
<td>60.29%</td>
</tr>
<tr>
<td><strong>Companies and Funds</strong></td>
<td>6,363.1</td>
<td>30.9%</td>
<td>199.9</td>
<td>24.1%</td>
<td>416.7</td>
<td>18.58%</td>
</tr>
<tr>
<td><strong>Public</strong></td>
<td>2,193.8</td>
<td>10.7%</td>
<td>82.1</td>
<td>9.9%</td>
<td>0.4</td>
<td>0.02%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20,559.6</strong></td>
<td></td>
<td><strong>829.2</strong></td>
<td></td>
<td><strong>2,242.6</strong></td>
<td></td>
</tr>
</tbody>
</table>


4.5.6. Conclusion and Recommendations

Sudan has passed through a turbulent time with the adverse influence of the economic slump caused by oil shocks following the separation of South Sudan. Infrastructure weaknesses in the country have also been due to the lack of economic diversification during and following the oil

67 http://www.shahama-sd.com/en/content/about-company
period and the continuous economic uncertainties. Sudan remains one of the potential countries for infrastructure investment using different Islamic financing and investment instruments if Sudan’s National Strategic Plan (2007 - 2032) succeeds in achieving economic diversifications and economic stability. Despite the huge funds spent by the government on infrastructure projects in the last decade, the infrastructure development needs in Sudan have exceeded the capacity of the state budget and the domestic financial sectors’ capacities.

Although PPP is not codified or regulated, different PPP projects have been implemented through GLCs, particularly during the early stage of the government privatization policy. For example, Sudatel, which is considered as one of the best and most successful infrastructure projects, was financed jointly by the government and private sector. Since the whole financial system in Sudan is Shariah-compliant, the current legal and regulatory regime is supportive to the Islamic finance industry. However, the contribution of Islamic banks in direct infrastructure investments has been relatively small, with only 3.59% of the assets invested in the sector. The financial institutions contribute to infrastructure development indirectly by investing in sukuk and GICs issued by the government.

The SFSC plays an important role in enabling the issuance of different Islamic financial securities. The government and infrastructure-related GLCs use the services of the SFSC to issue various types of Shariah-compliant certificates. While the government uses the funds to control liquidity at the macroeconomic level and to finance the annual budget, some securities are linked to the development of the infrastructure sector.

The issues and recommendations to further enhance the role of the financial sector in infrastructure development in Sudan are presented in Table 4.4.5 below.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure Related Strategies and Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sudan plans to increase the role of the private sector in infrastructure development and is improving the regulatory environment for PPPs with assistance from PPIAF.</td>
<td>• Develop Shariah-compliant contract templates that can be used for different types of infrastructure projects.</td>
<td>Relevant government bodies in coordination with IDBG</td>
</tr>
<tr>
<td>• Since infrastructure projects are complex and long term, there is a need to provide guarantees to other project specific risks to encourage private sector participation in infrastructure investments.</td>
<td>• Provide guarantees and insurance to mitigate risks in project financing. Takaful and guarantees can cover some of the project risks such as political risks, and partial credit risks would encourage Islamic financial institutions to invest in the infrastructure sector.</td>
<td>Relevant public bodies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private sector takaful companies</td>
</tr>
<tr>
<td><strong>Legal and Regulatory Regimes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Islamic bank contribution to infrastructure development can be increased by syndicated financing.</td>
<td>• Create a sound legal and contractual framework for syndication to increase the participation of Islamic banks in infrastructure projects.</td>
<td>Relevant government ministries</td>
</tr>
<tr>
<td><strong>Islamic Financial Institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Restricted investment accounts can be used for infrastructure projects since the investors of</td>
<td>• Increase the share of restricted investments accounts in Islamic banks.</td>
<td>Banking regulators</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Islamic banks</td>
</tr>
</tbody>
</table>
## Infrastructure Financing through Islamic Finance in the Islamic Countries

### Issues

1. While Sudan has a cooperative framework in the form of the Liquidity Management Fund from which banks can access liquidity in case they need it (COMCEC 2016), a well-functioning money market is lacking.

2. Although the balance sheet structures of nonbank institutions such as insurance companies are more compatible for investments in long-term projects, the takaful industry in Sudan parks a large percentage of its assets in banks.

3. The overall nonbank financial institution sector in Sudan is underdeveloped. Since the balance sheet structures of these institutions support investment in long-term investments, these institutions have the potential to increase funding to the infrastructure sector.

### Recommendations

1. Develop a well-functioning Islamic money market through which banks can access liquidity which would further resolve the problems of liquidity.

2. Increase the share of investments in project sukuk by takaful companies to enhance their contribution to the infrastructure sector.

3. Establish other nonbank financial institutions such as pension funds and sovereign wealth funds that can invest in long-term projects. With the anticipated increased in the role of the private sector in infrastructure investment, this institution can also provide information and advisory services on Islamic project financing.

### Implemented by

- Central bank
- Islamic banks
- Regulatory authorities
- Takaful companies
- Islamic nonbank financial institutions

## Islamic Capital Markets

1. The key player in capital markets is the government that issues various types of Islamic securities.

2. Sources of funds for infrastructure development can be diversified by issuing retail sukuk.

### Recommendations

1. Develop the market infrastructure for capital markets. This would also be required for the further participation of both retail and institutional investors and increase the size of the overall capital market in the country.

2. Issue retail sukuk

3. Introduce financial literacy programs to increase literacy in Islamic finance

4. Introduce an efficient mechanism for the delivery and redemption of sukuk issues.

### Implemented by

- Capital markets regulatory authority
- Issuers (sovereign and corporate)
- Capital markets regulatory authority
- Issuers (sovereign and corporate)
- Financial institutions

## Islamic Social Sector

1. Developing innovative models of zakat and waqf which can potentially provide social infrastructure services.

### Recommendations

1. Revive the institutions of zakat and waqf beyond their traditional roles and develop innovative models to provide some of the social infrastructure services.

### Implemented by

- Public and private sector zakat and waqf institutions
4.6. United Kingdom

4.6.1. UK Financial Sector and Islamic Finance: An Overview

The United Kingdom (UK) has a developed financial sector and is recognized as one of the top international financial centres in the world. The banking sector valued at USD 8 trillion is the largest in Europe, and the insurance sector is the fourth largest in the world and the largest in Europe with premiums of USD 304 billion constituting 20.7% of the premiums in the continent. The capital market is also one of the largest and most developed with 479 listed on the London Stock Exchange (representing 16% of the global total). The value of international bonds in the UK was USD 2.9 trillion and assets under management amounted to USD 11 trillion in 2016. The country was a net exporter of financial services worth USD 77 billion, making it the highest followed by the US at USD 44 billion. The UK is the largest market for foreign currency trade, with 37% of the global trading taking place in the country. Furthermore, the country offers other alternative financial products and services including hedge funds, private equity, derivatives trading, commodities trading, green finance, etc. Other than providing financial products, the country also offers other related professional services including legal services (TheCityUK 2017b).

Being an international financial centre, Islamic finance has been in the UK for almost 40 years. The UK made a strategic decision to encourage the growth of Islamic finance in the country to highlight the status of London as the key global financial centre for Islamic finance and also to financially include the Muslims living in the UK by providing them with retail Islamic financial services. Currently, the UK has the largest Islamic financial sector in the West, with the country ranked 22nd globally (among 124 countries) in Islamic financial services offerings. With five full-fledged Islamic banks and another 20 banks offering Shariah-compliant services, the value of Islamic banking assets was worth USD 5 billion in 2016. Although the Muslim population of 2.7 million (5% of the population) in the country is relatively small, being an international financial centre the UK attracts a lot of Shariah-compliant funds from overseas both in investment banks and capital markets.

The takaful sector has not been able to develop in the country. The British Islamic Insurance Company (traded as Salaam takaful) was established in 2008 to provide casualty insurance but closed after a year due to lack of business (Dunkley 2009). The Cobalt platform was launched in the London market in 2013 to allow a number of insurance firms to offer capacity through Takaful windows under a common management. With its capacity coming from insurers and reinsurers based in several jurisdictions, including a Shari‘ah compliant syndicate at Lloyd’s, Cobalt’s business was directed towards large commercial businesses in the international market (COMCEC 2016). More recently, InsureHalal, a fintech providing home insurance, was launched in the country in 2017.

The Islamic capital market in the UK is relatively well-developed. The LSE launched the first Islamic Finance Market Index in 2013, and Islamic funds managed in the UK are valued at USD

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728 million. A total of seven Shariah-compliant ETFs and 65 sukuk worth USD 48 billion are listed in LSE. The country also issued the first sovereign sukuk worth GBP 200 million in 2014 that was oversubscribed with orders of GBP 2.3 billion.

A key aspect of the UK’s role in Islamic finance relates to the provision of specialist legal expertise on Islamic finance by 25 major law firms. The role is apparent since English law is a common choice for many international Islamic financial transactions including sukuk. The legal firms also provide other specialist services related to tax, listings, structuring transactions, regulations and compliance (TheCityUK 2015).

4.6.2. Current Status of Infrastructure and Projected Investments

The status of the infrastructure and its quality in the UK compared to Europe and the North American region and OIC countries are shown in Chart 4.6.1. While the index of overall infrastructure in the UK (6.0) is significantly better than the average of Europe and North America (5.1) and OIC countries (3.6), the index of infrastructure quality in the country (5.0) is similar to that of the former region. Similar trends can be observed in transport infrastructure (5.5) and electricity and telephony infrastructure (6.5), which are much better than the indices for the Europe and North American region (4.5 and 5.6 respectively) and OIC countries (3.5 and 3.8 respectively).

Chart 4.6.1: Relative Status of Infrastructure in United Kingdom (2017) (0-7 Best)

The pipeline in terms of number of infrastructure projects and value in the UK for 2016-2021 is shown Chart 4.6.2. A total of 319 infrastructure projects valued at GBP 425.6 billion are planned during the period with the bulk of the projects (166) worth GBP 134.5 billion going to the transport sector. In terms of value, the energy sector will have the highest investments amounting to GBP 255.7 billion for 109 projects. The plan is to get over 50% private sector financing in the overall infrastructure investments during the period (IFA 2016: 19).
Table 4.6.1 shows the infrastructure needs and gaps that are projected for different sectors during the period 2016-2040. While most of the infrastructure sectors are projected to have little to no gaps over this period, the transportation sector is projected to have the largest deficit (GBP 136 billion) followed by airports (GBP 10 billion).

### Table 4.6.1: Infrastructure Needs and Gaps United Kingdom 2016-2040

<table>
<thead>
<tr>
<th></th>
<th>Road</th>
<th>Rail</th>
<th>Airports</th>
<th>Ports</th>
<th>Telecoms</th>
<th>Electricity</th>
<th>Water</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current trends</strong></td>
<td>319</td>
<td>387</td>
<td>72</td>
<td>14</td>
<td>303</td>
<td>332</td>
<td>233</td>
<td>1,660</td>
</tr>
<tr>
<td><strong>Investment need</strong></td>
<td>320</td>
<td>523</td>
<td>82</td>
<td>16</td>
<td>303</td>
<td>332</td>
<td>234</td>
<td>1,809</td>
</tr>
<tr>
<td><strong>Gap between IN and CT</strong></td>
<td>0</td>
<td>136</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>148</td>
</tr>
</tbody>
</table>

*Source: Global Infrastructure Outlook*

### 4.6.3. National Infrastructure Outlook

The UK moved to increase the role of the private sector in infrastructure during the reign of the Conservative Prime Minister Margaret Thatcher and the trend continued in the later regimes. The Private Finance Initiative (PFI) was introduced in 1992 by the government of John Major to provide a framework for using PPP in infrastructure projects. In 2012, HM Treasury further developed the framework to further enhance the role of private sector participation by issuing the document ‘A new approach to public private partnerships’. Termed as Private Finance 2 (PF2), the document highlights the ways in which the private sector can engage in the development of infrastructure by outlining its role in providing equity and debt-financing to enhance efficiency, transparency and value for money in infrastructure projects (HM Treasury 2012; Richards et. al. 2018).

Recognizing the importance of infrastructure in the economy, the government of the UK established two public institutions to deal with the orderly development of infrastructure in the country. The National Infrastructure Commission (NIC) was established to provide expert
and impartial advice to the government and carry out an objective analysis of the future long-term needs and pressing issues related to infrastructure in the UK. NIC prepared the National Infrastructure Assessment examining the infrastructures needs for the country for the next 20 years and identified major projects with strategic significance that need to be undertaken. While the proposals of the NIC provide objective, non-political guidelines on the infrastructure that needs to be undertaken with a long term perspective, the government is the one that ultimately decides on the projects that are eventually delivered.

The second key institution, the Infrastructure and Projects Authority (IPA), was established in 2016 by merging Infrastructure UK and Major Projects Authority. Reporting to HM Treasury and the Cabinet Office ministers, IPA serves as the centre of excellence for project finance, providing expert support. The roles of IPA include tracking and reporting on the progress of infrastructure projects, overseeing the Private Finance 2 (PF2) policy, developing the commercial and finance capabilities, and delivering the UK Guarantee scheme.

The key function of IPA includes helping implement the projects identified in long-term plans successfully. It prepares the National Infrastructure Delivery Plan (NIDP) in which the infrastructure projects that are being implemented in the medium term are detailed. The infrastructure projects selected in NIDP 2016-2021 are nationally significant, making a significant contribution to the government’s strategic objects and having the potential to drive private investment and economic growth.

The government has taken a number of steps to promote the role of the private sector in infrastructure development. Other than providing a sound regulatory framework, the government issued ‘PF2: A User Guide’ and a format of standardized contracts to have a clear structure for private sector participation under PF2. The standardized contract that can be used for investments in infrastructure projects reduces the costs of transactions and mitigates the legal ambiguities in complex transactions.

The government initiated the UK Guarantee Scheme (UKGS) that provides guarantees for debt of up to GBP 40 billion to support private sector investments in infrastructure projects of national importance (IPA 2016). Since the guarantee is given by government upgrades the financing as sovereign-backed debt, the funds can be raised in more favourable terms. The Scheme has already benefited nine projects covering different sectors and is expected to continue until 2026 (Richards et. al 2018).

The government has also taken steps to encourage institutional investors to contribute to infrastructure financing. Under the advisory role of HM Treasury, the National Association of Pension Funds and Pension Protection Fund launched the Pensions Infrastructure Platform (PIP) in 2012. A signatory of UN Principles for Responsible Investment, PIP plans to invest GBP 2 billion in the infrastructure sector in a sustainable manner. Similarly, the Association of British Insurers set up the Insurers’ Infrastructure Investment Forum to have a better link with the government to increase investments in infrastructure projects. Insurers were committed to invest GBP 25 billion with partners over five years starting in 2013 (IPA 2016).

4.6.4. Legal and Regulatory Framework for Infrastructure Investment

There is no stand-alone PPP law in the UK. Infrastructure projects are initiated with the private sector under the general legislative powers of the government and some laws that govern the specific sector. There is no unified procurement procedure and public bodies dealing with different infrastructure sectors use appropriate procurement structures suitable for the nature of the project. Given the powers given to different public bodies dealing with infrastructure, PPP concessions are arranged using English contract law.

Although each procuring body can structure their own procedure and contracts, they have to follow a uniform approval process. HM Treasury must approve the project which starts with the strategic outline at the initiation stage and ends with the final business case before the last negotiation stage. After the contracts are finalized, the Cabinet Office approves the projects and the IPA oversees the process of procurement.

The Public Contracts Directive 2014/24/EU, implemented in the UK as Public Contracts Regulations 2015, governs the contracts of procuring works, goods and services. The regulation identifies three regimes depending on the threshold levels of procurement and applies rules accordingly. Since infrastructure projects are large, they fall in the highest procurement regime which is fully regulated.

While each public body has the freedom to structure their own PPP contracts, an initiative was taken in 1997 to standardize the contracts used in PFI projects by issuing the Standardization of Procurement Contracts (SOPC). Version 4 of the standardized contracts, SOPC4, was issued in 2012 after the introduction of PF2. SOPC4 identifies required and recommended provisions that should be included in PPP contracts. The standard form of PF2 contracts includes issues related to payments to contractors, asset and land ownership, amendments and variations that may occur due to the long term nature of contracts, risk allocation between parties, early termination and compensation and refinancing. In October 2017, the government decided to review SOPC4 to include changes in the EUROSTAT regulations and also come up with a new contractual framework that can increase the participation of the private sector in infrastructure development (Richards et. al. 2018).

Chart 4.6.3 shows the status of the procurement regime in the UK as discussed in Chapter 2 relative to other country groupings. The results show the high status of all three stages of the procurement regime under PPP in the UK. The index for preparation for the UK is 96, which is significantly higher than the average for the high income group (63) and Europe and Central Asia (50). Similar trends can be observed in procurement and contract management with index scores of 86 and 71 respectively for the UK.
4.6.4.1. Laws and Regulations Supporting Islamic Finance

Islamic finance has operated in the UK since 1982 and the government has taken initiatives to provide a sound legal and regulatory framework for the development of the industry. This has been done not only to promote London as an international Islamic financial centre but also to provide financial services to the Muslim citizens of the country at the retail level. Other than instituting supporting laws and regulations related to Islamic finance, various consultative bodies were formed to promote the industry in the country. These initiatives include the Islamic Finance Working Group established by Bank of England in 2001, Tax Technical Group established by HM Treasury and HM Revenues and Customs in 2003, HM Treasury Islamic Finance Experts Group formed in 2007, the UK Islamic Finance Secretariat (UKIFS) formed in 2011, and the ministerial-led Islamic Finance Task Force (IFTF) established in 2013 (UKTI 2013).

Since the UK is a member of the EU, most of the legal and regulatory framework governing the financial sector is governed at the EU level. The regulatory approach towards Islamic finance has been facilitative but within existing regulations. For example, while no specific law for sukuk exists, the instrument can be issued under the “alternative finance investment bonds” framework. One area in which the UK government has control is on the taxation regime. Accordingly, specific steps have been taken to accommodate Islamic finance through Alternative Finance clauses to various Taxation Acts (COMCEC 2016). In the Finance Act 2003, the Stamp Duty Land Tax (SDLT) was amended to accommodate Islamic mortgage financing to avoid double taxation. The legislation of 2005 recognized murabahah, a finance contract, and the SDLT was extended to cover profit-sharing contracts. In 2006, diminishing musharakah was classified as an asset financing contract and an SDLT treatment was also applied to

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71 Currently, the UK is in the process of negotiating an exit from the EU, and if Brexit materializes this may not apply. However, currently the UK is still following the financial laws and regulations of EU.

4.6.5. Role of Islamic Finance in Infrastructure Finance

Though Islamic finance forms a small part of the overall financial sector, the industry has contributed to the development of a few infrastructure projects in the UK. The projects that have had Islamic finance components include Battersea Power Station regeneration, the redevelopment of Chelsea Barracks, and the Olympic Village. While AlRayyan Bank has not played any role in these projects, partly due to its small size, funds have come from Islamic investment banks. Gatehouse Bank, an Islamic investment bank, also invested GBP 700 million to develop 6,500 homes in the North West and Midlands (UKTI 2014 and BEB 2015). Table 4.6.2 shows the size of the Islamic banking sector and the investments made in the infrastructure sector. With assets worth GBP 4.07 billion, only 1.77% of these are invested in the infrastructure sector. However, the table shows that a significant part (11.1%) of Islamic bank assets in the UK are in sukuk holdings.

**Table 4.6.2: Islamic Bank Asset Structure and Financing of the Infrastructure Sector, UK (Q1 2018) (GBP million)**

<table>
<thead>
<tr>
<th>Asset Composition</th>
<th>Total Shariah-compliant financing (excluding interbank financing)</th>
<th>Sukūk holdings</th>
<th>Other Sharī`ah-compliant securities</th>
<th>Interbank financing</th>
<th>All other assets</th>
<th>Total assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GBP (Million)</td>
<td>% of total</td>
<td>GBP (Million)</td>
<td>% of total</td>
<td>GBP (Million)</td>
<td>% of total</td>
</tr>
<tr>
<td>Total Islamic Banking Assets</td>
<td>2,752.3</td>
<td>67.6%</td>
<td>453.0</td>
<td>11.1%</td>
<td>82.2</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

| Infrastructure Financing by Islamic Banks | 5.1 | 0.16% | 14.6 | 0.47% | 9.3 | 0.30% | 21.0 | 0.68% | 0.0 | 0.00% | 5.0 | 0.16% | 55.0 | 1.77% |

<table>
<thead>
<tr>
<th>Financing going to infrastructure</th>
<th>Electricity, gas, steam and air-conditioning supply</th>
<th>Water supply; sewerage and waste management</th>
<th>Transportation and storage</th>
<th>Information and communication</th>
<th>Education</th>
<th>Human health and social work activities</th>
<th>Total Infrastructure</th>
</tr>
</thead>
</table>

Source: IFSB Prudential and Structural Islamic Financial Indicators (PSIFIs)

As indicated, the government issued a sovereign sukuk valued at GBP 200 million in 2014. While there is no indication that the funds raised by the government were used for specific infrastructure projects, the huge demand of the sukuk with GBP 2 billion in orders indicate the potential for using the instrument to raise funds for infrastructure projects in the country.

**Case Study: Green Investment Group**

The UK government initiated a unique financial institution, Green Investment Bank plc in 2012, to invest in green energy infrastructure. The bank was acquired by Macquarie Group Limited in 2017 and changed their name to Green Investment Group (GIG). GIG invests equity and debt in different types of green energy infrastructure technologies including wind, solar, hydro and waste and bioenergy. Other than investments, GIG also provides other services that include green impact reporting, green bank advisory and merger and acquisitions in a low

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carbon economy. During the year beginning in August 2017 when GIG was formed, the institution arranged for investments of over GBP 1.6 billion for different projects, which led to the generation of 84,941 GWh of renewal energy, avoiding 17,190 kt of CO$_2$ emissions and 15,652 kl of waste in landfills.\textsuperscript{74} GIG has made investments in green energy infrastructure beyond the UK and is planning to expand its activities to other regions such as Europe, North America and Asia.

4.6.6. Conclusion and Recommendations

Being a developed economy, the UK has a relatively well-built infrastructure. However, moving forward, the existing infrastructure has to be upgraded and new infrastructure has to be added. The estimates show that the transportation sector may face significant funding gaps in the next couple of decades. Although the Islamic financial industry in the country is relatively small, there have been a few cases in which the Islamic financial institutions have funded infrastructure projects. The over subscription of the sovereign sukuk issued in 2014 indicates the potential of using the instrument to raise funds for infrastructure investments.

A key feature of the infrastructure financing provided by the Islamic financial sector is that the funds are sourced from overseas investors. Thus, Islamic finance provides an alternative source for raising funds for infrastructure projects in the UK, both in terms of direct financing by Islamic financial institutions and by issuing sukuk.

The issues and recommendations to further enhance the role of Islamic finance in infrastructure development in UK are presented in Table 4.6.3.

<table>
<thead>
<tr>
<th>Table 4.6.3 Issues and Policy Recommendations: United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Issues</strong></td>
</tr>
<tr>
<td>Legal and Regulatory Regimes</td>
</tr>
<tr>
<td>• The financial laws and regulations in the UK are governed by the EU legal and regulatory framework. The government has changed the tax laws and regulations to level the playing field.</td>
</tr>
<tr>
<td>• Guarantee is provided by the UK Guarantee Scheme for infrastructure projects.</td>
</tr>
<tr>
<td>Islamic Financial Institutions</td>
</tr>
<tr>
<td>• It becomes difficult for Islamic banks to participate in infrastructure projects given their smaller size.</td>
</tr>
<tr>
<td>• The Islamic nonbank financial institutions in the UK are mainly investment banks, the financial institutions such as takaful and pension funds are non-existent.</td>
</tr>
</tbody>
</table>

\textsuperscript{74}http://greeninvestmentgroup.com/media/209163/green-investment-group-progress-report.pdf
The Islamic capital market has the potential to contribute to the infrastructure sector given that the sovereign sukuk issued by the UK government was oversubscribed.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Recommendations</th>
<th>Implemented by</th>
</tr>
</thead>
</table>
| Islamic Capital Markets                                               | Issue sukuk to raise funds to finance their infrastructure projects. | Capital markets regulatory authority
Issuers (sovereign and corporate)
Financial institutions       |
5 Policy Recommendations

After identifying the issues from the literature and analysing the country case studies in the previous chapters, this section provides policy recommendations at different levels. The overall status of the infrastructure and its quality in the countries included in the study is shown in Chart 5.1. The overall status of infrastructure is the best in the UK, a developed country. The status of infrastructure of three countries, Malaysia, Saudi Arabia and Indonesia are better than the OIC average, with Malaysia scoring the highest. Nigeria, however, scores less than the OIC average, indicating the poor status and quality of infrastructure in the country.

Chart 5. 1: Infrastructure Status in Sample Countries (0-7 Best)

Source: WEF (2018), The Global Competitive Index Historical Database

5.1. Infrastructure Related Strategy and Policies

The country case studies show that strategy and policies related to infrastructure development can be broadly categorized into three factors. First, given the large size of infrastructure projects, there is a need to have long, medium and short-term plans for infrastructure development. Once the infrastructure needs are determined, an appropriate environment has to be created to increase the role of the private sector. Finally, there is a need to have additional supporting institutions that can help promote the involvement of the private sector in infrastructure investments. The lessons learnt from the specific issues in these factors from the country case studies are discussed below.

5.1.1. Long, Medium and Short-term Strategies and Plans

All countries have some sort of plan that incorporate infrastructure development issues. While in some cases countries have longer term national strategies that would have indications of the role of infrastructure in achieving development goals, in other countries there are specific medium and short term plans related to infrastructure. Malaysia introduced Vision 2020 in 1991 and identified the role that sound infrastructure would play in achieving the vision. The

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75 Information on Sudan is not reported in the WEF (2018) database.
country also had medium (10-year policy documents) and short term (five-year) plans that had more specific targets on infrastructure projects. Indonesia’s medium term plan 2005-2025 which is subdivided into four five years plans is a national development strategy that lists specific infrastructure projects for the country and identifies those that are national strategic and priority projects.

Saudi Arabia launched its Vision 2030 relatively recently and identifies the role of private sector in developing infrastructure in the future. Sudan also has a Comprehensive National Strategy for Economic Development which is implemented in five-year plans which suggests the infrastructure projects that will be implemented. Nigeria initiated the National Integrated Infrastructure Masterplan 2014-2043 which is specific to the infrastructure sector. The plan not only recognizes the sector-specific projects to be undertaken but also identifies the sources of funding. The UK has established two institutions that deal with infrastructure strategies and implementation. While the National Infrastructure Commission provides an objective assessment of infrastructure requirements for the country over the longer run, the Infrastructure and Projects Authority oversees the planning and implementing of specific projects over the medium and short terms by, among others, preparing the National Infrastructure Delivery Plan.

The experiences show that it is recommended to have a longer-term vision for the development of the economy which is the responsibility of the head of government. This role can be assigned to a specialist public institutions that can provide an objective and impartial list of infrastructure projects that should be undertaken to enhance economic growth. The medium strategy for infrastructure development would reflect the projects that are needed to achieve the vision. This can be prepared by the Ministry of Planning or Economic Development.

A key goal of strategies and plans is to identify projects that are the most beneficial to the economy. Given the large sizes of infrastructure projects and the huge gaps in the infrastructure strategy, there is a need to identify priority projects. The country case study on the UK shows that an independent National Infrastructure Commission provides an independent and objective assessment of the projects that are needed, taking into consideration the long-term needs of the economy. In Indonesia, the government identifies the National Strategic Projects and Priority Projects that are given precedence for implementation. These priority projects can be incorporated in shorter term (five-year) plans for implementation. The specific projects identified in the short-term plans can then be implemented by the relevant ministries.

Moving forward, most of the OIC member countries will be striving to achieve the SDGs that will require a sound infrastructure framework. A key feature of the infrastructure under the SDG framework would be to also focus on quality by considering the sustainability-related issues of different projects. This would require incorporating the appropriate technologies that consider the environment and social implications of infrastructure projects when developing the short-and medium term plans and strategies.
5.1.2. PPP Framework

The second aspect of a national level policy framework for infrastructure development is to have an institutional setup which can facilitate investments by the private sector. This is done in several ways. In Indonesia, the PPP Directorate of Indonesia under the Ministry of National Development Planning is responsible for overseeing the projects undertaken under PPP arrangements. Furthermore, the Committee for the Acceleration of Priority Infrastructure Delivery (KPPP), constituting members from different ministries, is responsible to facilitate implementation of strategic and priority projects. Similarly, in Malaysia, a PPP Unit under the Prime Minister’s Department is responsible for planning and facilitating PPP projects. In Nigeria, a separate government entity, the Infrastructure Concession Regulatory Commission, has created regulations that govern PPP projects. In Saudi Arabia, the National Centre for Privatization and PPP was established recently with a mandate to facilitate the promotion of PPP in the country. While Sudan’s Five-Year Program for Economic Reform (2015-2019) recognizes the need to develop PPP arrangements, there are no formal public institutions that deal with PPP. This reflects the relatively low participation of the private sector in infrastructure projects in the country. In the UK, there is no unified PPP procurement procedure and different public bodies deal with infrastructure through PPP concessions. However, they have to follow a uniform approval process where HM Treasury must approve the project. Furthermore, the government issued the SOPC4 which provides a framework of standardized contracts that can be used for PPP projects.

5.1.3. Other Institutional Setups

Given the special features of long-term financing and risks that arise in infrastructure financing, there is a need to come up with certain institutional setups that can encourage the private sector to invest in infrastructure projects. The country case studies show that the following factors would help promote the investment climate for private sector participation.

**Institution to Provide Advisory Services:** While PT Sarana Multi Infrastructure (PT SMI) is a state owned financial institution that provides funding for infrastructure projects in the form of equity, debt and securities, it also provides advisory services related to project development and assists private sector entities. Since infrastructure projects are large and complex with little know-how, an institution that can advise private sector investors on financing arrangements has the potential to increase investments in the infrastructure sector. Similarly, the Infrastructure and Projects Authority in the UK supports the implementation of the Private Finance 2 initiative by developing the appropriate commercial and finance capabilities.

**Guarantees on PPP Contracts:** Investors face various political and commercial risks in infrastructure projects that are mitigated in different ways. A unique risk relates to the risks arising from the government not fulfilling the contractual obligations under the PPP contract. An insurance that can mitigate this risk increases the participation of the private sector in infrastructure projects. The Infrastructure Guarantee Fund (IIGF) in Indonesia provides guarantees that government contracting agencies will fulfil the contractual obligations of the Cooperation Agreement of PPP projects. Similar schemes can be introduced in other countries to increase PPP in infrastructure projects.
Table 5.1: Policy Recommendations for Infrastructure-Related Strategies and Policies

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Develop Long, Medium and Short-term Strategies and Plans</td>
<td>• Long-term national level development strategy or vision</td>
<td>• Highest level of government</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medium-term strategy or plans for infrastructure development</td>
<td>• Ministry of Planning / Economic Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Short term plans identify priority projects that would be implemented</td>
<td>• Relevant government ministries or a specialized public body</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Incorporating qualitative aspects of sustainability and environment related</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>implications in infrastructure plans and strategies</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Develop a sound PPP Framework</td>
<td>• Set up a specific department or agency or an independent authority that is</td>
<td>• Relevant government ministry responsible for infrastructure development and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>responsible for implementing PPP regulations and projects</td>
<td>planning</td>
</tr>
<tr>
<td>1.3</td>
<td>Setup Other Supportive Institutional Setups to Enhance Private Sector Investments</td>
<td>• Institution to provide advisory services on PPP implementation</td>
<td>• Relevant government ministry responsible for infrastructure development and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Guarantees on PPP Contract Implementation</td>
<td>planning</td>
</tr>
</tbody>
</table>

5.2. Legal and Regulatory framework

Since infrastructure projects are large and complex with long maturities, there is a need to have a predictable legal and regulatory framework to mitigate legal uncertainties and risks. The relevant laws and regulations that can provide a sound environment for increasing the role of Islamic finance investments identified for different countries are discussed to come up with policy implications and increase private sector participation.

5.2.1. Laws/Regulations Governing Private Sector Participation in Infrastructure

Countries have a variety of legal/regulatory frameworks for private sector participation in infrastructure projects. In Nigeria, the Infrastructure Concession Regulatory Commission (Establishment) Act 2005 regulates PPP contracts and authorizes the Commission to provide further rules and regulations on PPP to create an enabling environment for infrastructure investments in the country. While the Presidential Regulations (38/2015) provides the general framework for PPP in Indonesia, the Minister of National Development Planning/Head of National Planning Agency Regulation No. 3/2012 outlines the general operational guidelines for the implementation of PPP projects. The formal legal framework for PPP in Saudi Arabia was developed recently with the establishment of the National Centre for Privatization & PPP (NCP) which issued the Privatization Projects Manual in 2018. In Malaysia, there is specific no
law or regulation related to PPP, but the Public Private Partnership (PPP) Guideline issued by the PPP Unit, Prime Minister’s Office guides the implementation of PPP projects. Sudan has recently set up a PPP Unit in 2018 with the support of the World Bank. Although in the UK, there is no specific PPP law, the Private Finance 2 initiative provides the guidelines for implementing PPP.

The UK has developed a standardized contract format that can be used in different PPP projects and helps in reducing transactions costs and legal ambiguities. The role of Islamic finance can be enhanced through the use of a Shariah-compliant, standardized contract format that can be used in different PPP projects which can be developed. While this can be done in each OIC country, an initiative by the Islamic Development Bank to develop the contract template would be more efficient since the bank has a vast amount of experience in financing infrastructure projects.

Since most countries would be inclined to invest in sustainable infrastructures under the SDGs framework, there is a need to enact supportive laws and regulations that can support these initiatives. For example, the Guidelines of Sustainable and Responsible Investment Funds issued by the Securities Commission Malaysia provides the guidelines for raising funds that can be used in sustainable infrastructure projects. Similarly, the regulations related to the Upfront Tariff Regime in Pakistan that defines the Feed in Tariff and the permitted indexations and escalations applicable during the concession period creates incentives for private sector players to invest in solar energy projects.

5.2.2. Sector-Specific Laws/Regulations

Given the uniqueness of different infrastructure sectors, there may be a need for laws and regulations to cater to the specific features of the sectors. For example, Nigeria has a set of acts for different infrastructure sectors such as the Federal Highways Act, National Railway Corporation Act, Nigerian Civil Aviation Authority Act, Nigerian Ports Authority Act, etc. In Indonesia, Government Regulation No. 40/2012 relates to airport construction and environment preservation and Government Regulation No. 14/2012 relates to electricity business provision. In Malaysia, the Energy Commission Act 2001 established the Energy Commission (Suruhanjaya Tenaga) to regulate the energy (electricity and gas) sector in Malaysia, and the Electricity & Cogeneration Regulatory Authority (ECRA) was established through Royal Decree No. M/56 2005 in Saudi Arabia.

5.2.3. Public Procurement Regime

The procurement framework and processes for infrastructure projects must be open, transparent and competitive and allow for multiple parties to bid for infrastructure projects. To avoid confusion and suspicion, the procurement procedures should clearly outline the criteria used for soliciting and evaluating proposals. Some of the countries examined in the study have laws/regulations governing procurement. In Indonesia, Presidential Regulation No. 38/2015 on the Cooperation between Government and Business Entities on Procurement of Infrastructure provides guidelines on the regulatory framework for procurement in PPP projects. Public Procurement (PP) Act 2007 in Nigeria outlines the procedures of procurement of infrastructure projects in the country. In Malaysia, the Private Partnership (PPP) Guideline provides the key principles on how the infrastructure projects are procured and implemented, and the Guidelines for Integrity Pact Implementation in Government Procurement issued by
the Ministry of Finance covers different stages of government procurement processes to enhance transparency and mitigate corrupt practices. The Government Tenders and Procurement Law was enacted in Saudi Arabia by Royal Decree No.M/58 in 2006 to regulate procedures of tenders and procurements carried out by the government authorities and ensure they are not influenced by personal interests in order to protect public funds.

As discussed in Chapter 2, World Bank (2018f) identifies three main stages of the institutional setup of PPP project cycle as preparation, implementation and management of contract. While in the preparation stage the potential infrastructure projects that can be procured for development as PPPs are identified, in the second stage the assessment and execution of procurement is executed. In the final stage, PPP is managed by monitoring and evaluating the activities and processes vis-à-vis the contract. The status of the procurement regime in the countries examined is shown in Chart 5.2. The procurement regime in the UK scores the highest, followed by Indonesia. The procurement regimes for other OIC countries in the sample are relatively underdeveloped. While Indonesia has a better procurement regime and Nigeria’s procurement regime is similar to the OIC average, the remaining countries (Malaysia, Saudi Arabia and Sudan) have a lower status of procurement compared to the OIC average.

Chart 5.2: Relative Status of PPP Procurement Regimes (0-100 Highest)

Source: World Bank (2018f)

5.2.4. Legal Environment for Islamic Finance

A supportive legal and regulatory environment for Islamic finance is necessary for its growth and contribution to the development of the infrastructure sector. In this regard, there is a need to have supportive Islamic financial laws covering banks, takaful and capital markets. Islamic finance laws can be issued as stand-alone laws incorporated into existing financial laws. While Sudan’s whole financial sector is Islamic, in other countries there is a need to enact new laws or adjust existing financial laws to accommodate Islamic financial practices.

The Malaysian government has enacted various laws that are supportive of Islamic finance. While IFSAl 2013 provides a robust, legal framework for the Islamic banking and takaful sectors, the Capital Markets and Services Act 2007 has provisions for Islamic securities such as
sukuk. While Nigeria has no dedicated laws for Islamic finance, the Islamic financial sectors are
amcommodated for under conventional finance laws. The Banks and Other Financial
Institutions Act (BOFIA) 1991, Central Bank of Nigeria (CBN) Act 2007, Investment and
Act 2003 empower the regulatory bodies to develop regulations for the Islamic finance
industry.

In Indonesia, Islamic Banking Act Number 21, 2008 governs Islamic banking, and Sukuk Act
Number 19, 2008 provides the legal foundations of issuing sukuk in the country. However,
there is separate takaful law and the sector is regulated under the Insurance Act Number 40
2014 which governs the insurance industry in the country. The banking law in Saudi Arabia
(Royal Decree No. M/5 dated 22/02/1386H / 11/06/1966) and The Capital Markets Law
(Royal Decree No. M/30 dated 2/6/1424H / 31/7/2003) does not explicitly refer to Islamic
finance. However, the Law on Supervision of Cooperative Insurance Companies (LSCIC 2003)
mentions that insurance service offerings should be in accordance with Islamic law.

Since infrastructure projects are complex and Islamic finance is relatively new, the contractual
framework for Shariah-compliant project financing may not be well-known. If each financial
institution involves lawyers and other stakeholders structuring these contracts, it increases
the costs of structuring and discourages Islamic financial institutions from investing in
infrastructure projects. In this regard, a standardized Shariah-compliant contract template for
project financing (similar to the standardized contracts issued by the UK government for
infrastructure projects) can be developed which can be used by different Islamic financial
institutions. These standardized contracts would reduce the costs of transactions and mitigate
the legal ambiguities of complex transactions.

Another issue that affects Islamic finance is tax laws. As Islamic financial products are based on
sale, leasing and partnership contracts which have tax implications, these products can turn
out to be more costly compared to their conventional counterparts. COMCEC (2016)
recommends changing or accommodating tax laws to level the playing field of Islamic banking
and conventional banks and also tax neutrality issues arising in sukuk issuances. In Malaysia,
the tax regime has not only been changed to level the playing field with conventional finance
but some tax incentives have been instituted to encourage the use of sukuk. For example,
issuers of sukuk can get tax deductions of the issuing costs incurred by SPVs and stamp duty
exemptions on instruments used to issue sukuk. Similarly, the tax laws have been changed in
the UK to level the playing field of Islamic finance with their conventional counterparts.
Table 5.2: Policy Recommendations for Legal and Regulatory Regimes

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
</table>
| 2.1 | Introduce Appropriate Laws/Regulations governing Infrastructure | • Laws/regulations related to private sector participation (PPP)  
• Laws/regulations related to specific infrastructure sectors  
• Provide a sound legal and regulatory framework for encouraging investments in infrastructure projects  
• Develop a standardized Shariah-compliant contract format that can be used in different PPP projects | • Government and relevant ministries  
• Government and relevant ministries  
• Governments in collaboration with IDB |
| 2.2 | Enhance the Public Procurement Framework            | • Enact laws/regulations that provide clarity with regards to procurement in PPP | • Government and relevant ministries                 |
| 2.3 | Provide Supportive Tax Regimes                      | • Adapt/change tax laws to create a level playing field between Islamic finance and conventional finance | • Ministry of Finance                               |
| 2.4 | Enact Islamic Financial Laws                        | • Islamic banking law  
• Takaful law  
• Islamic capital markets law | • Government (Ministry of Law/Legal Affairs)                                      |

5.3. Government and Government Linked Companies

Although the government develops infrastructure projects through procurement, in many countries government-linked companies (GLCs) or state-owned enterprises (SOEs) are established to deliver various infrastructure services. Since many of these companies also have private shareholders, the key objectives of creating GLCs is to improve efficiency and productivity and encourage innovation. The country case studies show that there are three types of GLCs when it comes to the infrastructure sector. First, GLCs that provide the infrastructure services such as utility or telecommunications. Second, government-linked investment companies (GLICs) that invest in infrastructure projects. Finally, GLCs that provide support services such as guarantees to promote investments in infrastructure projects. The role of Islamic finance in supporting infrastructure projects initiated by the government and GLCs is discussed below.

5.3.1. Government Budget Support

The country case studies show that governments are still the key players in the provision of infrastructure in most countries. Many governments have issued sukuk to raise funds for financing either their budgets in general or infrastructure projects in particular. For example, in Saudi Arabia, the government raised USD 19.2 billion domestically and USD 12.5 billion from international investors in 2017 by issuing bonds and sukuk to cover budgetary deficits. Since the allocations of budgets are also used for infrastructure projects, part of the funds raised has
been used to fund these projects. In Sudan, the government regularly issues various sukuk every year. The Government Investment Sukuk (Sarh) is issued by the Ministry of Finance and National Economy (MFNE) to finance infrastructure projects in the various states of Sudan. In Nigeria, a sovereign sukuk raised funds for the government for building 25 priority roads around the country and a subnational sukuk financed the construction of schools.

5.3.2. Infrastructure Related GLCs

While most of the infrastructure investments in Saudi Arabia and Sudan in the recent past have been carried out by the government, GLCs have played an important role in some countries to provide certain infrastructure services. For example, in Malaysia GLCs play an important role in the infrastructure sector with estimates that they provide 93% of the utilities and 80% of transportation and warehousing. In the telecommunications sector, Sudatel in Sudan, which is 60% owned by the government, was established as one of the first SOEs to provide telecommunications and internet services. Some GLCs have raised funds using sukuk to invest in the infrastructure sector. For example, In Indonesia, the Ministry of SOE has tapped into Islamic finance to raise funds for some GLC schemes with the National Electricity Company (PLN) raising 40% of IDR 16.3 trillion (USD11.6 billion) financing by issuing sukuk.

5.3.3. Government-Linked Investment Companies (GLICs)

GLICs are national-level public companies and funds that provide financing for infrastructure projects. The GLICs support infrastructure development in different ways. First, they provide the capital to establish infrastructure related GLCs. For example, in Malaysia, Permodalan Nasional Bhd, Kumpulan Wang Persaraan and Lembaga Tabung Haji own significant stakes in Axiata Group Berhad, a key provider of mobile telecommunications. Similarly, shareholders of Tenaga Nasional Berhad, the dominant player in the electricity sector, include Permodalan Nasional Bhd, Kumpulan Wang Persaraan and Lembaga Tabung Haji. The second type of GLIC can be established to raise funds for infrastructure projects. An example of this type of GLIC is the infrastructure financing entity DanaInfra Nasional Berhad in Malaysia which is wholly-owned by the Ministry of Finance. The objective of DanaInfra is to raise funds for the construction of infrastructure projects.

While some of the GLICs are partly Shariah-compliant, others are wholly Islamic. For example, Lembaga Tabung Haji is Shariah-compliant. DanaInfra raised a total of RM2.5 billion (USD 789.14 million) by selling different series of sukuk to partly cover the total cost of the USD 6.2 billion Klang Valley Mass Rapid Transit (MRT) Project. In the UK, the government established the Green Investment Bank in 2012 to provide financing for sustainable and green energy-related infrastructure projects. The bank was acquired by Macquarie Group and renamed the Green Investment Group in 2017.

Given the huge demands and financing gaps in the infrastructure sector in different OIC member countries, one option to increase the role of Islamic finance in this sector would be to establish a national level Islamic Investment Bank. While the initiative to create the bank can be taken by the government and other GLICs, once established funds can be raised by issuing sukuk and seeking investments from private sector institutional investors. Furthermore, the bank can take initiatives to organize syndicated financing by pooling funds from other Islamic financial institutions to finance infrastructure projects.
5.3.4. Providing Support Services

Since the private sector will typically invest in projects for a return, its role in the infrastructure sector is limited to those projects that are profitable. The role of the private sector in infrastructure development can be enhanced if the viability of some projects can be enhanced. This can be done by either providing subsidies or revenue support. The Availability Payment scheme in Indonesia instituted by the Ministry of Finance supports projects that are not commercially viable and have high demand risks through budgetary allocations to enable private participation.

There are other institutions that provide support services such as guarantees to promote investments in infrastructure projects. For example, Danajamin Nasional Berhad in Malaysia established by the Ministry of Finance and Credit Guarantee Corporation in Malaysia provides financial guarantees and insurance for bonds and sukuk issuances to Malaysian companies that can help investments in the infrastructure sector. Being a GLC, the guarantees provided by Danajamin are rated AAA by RAM Rating Services and the Malaysian Rating Corporation (MARC). Similarly, the UK Guarantee Scheme was established to provide guarantees to encourage investments from the private sector for infrastructure projects of national importance.

Table 5.3: Policy Recommendations for Government and Public Bodies

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
</table>
| 3.1 | Establish Infrastructure related (GLCs)             | • Establish infrastructure-related GLCs to develop and manage infrastructure assets  
• GLCs issue sukuk to fund infrastructure projects | • Government (Ministry of Finance)  
• GLCs |
| 3.2 | Establish National Islamic Infrastructure Investment Bank | • Establish Shariah-compliant infrastructure investment bank as GLIC  
• Government and GLCs can provide initial capital  
• Issue sukuk to fund infrastructure projects | • Relevant government ministries  
• GLICs |
| 3.3 | Providing Supportive Services                      | • Provide public financial support to improve the viability of infrastructure projects  
• Establish institutions that can provide guarantees for infrastructure projects | • Relevant government ministries |

5.4. Islamic Banks

As indicated in Chapter 3, the total global banking assets are worth USD 1.598 trillion and constitute 72.6% of the overall Islamic financial industry. Though large, the size of the Islamic banking sector is different in various countries. The relative size of Islamic banking in the countries examined in Chapter 4 along with investments in the infrastructure sectors and
sukuk are shown in Table 5.4. Indonesian banking assets during Q1 2018 were valued at USD21.37 billion, of which USD 1.79 billion or 8.4% was used to finance the infrastructure sector. The total assets of Islamic banks in Malaysia in Q1 2018 were valued at USD 172.265 billion, of which only RM 29.112 billion (USD 7.538 billion) or 4.38% of the total assets went to finance the infrastructure sectors. Of the total assets of USD 159.131 billion of the Islamic banks in Saudi Arabia, only USD 5.955 billion equivalent to 3.74% of the total assets was used in the infrastructure sectors. The total Islamic banking assets of Sudan were valued at USD 10.440 billion out of which only USD 374 million or 3.59% was spent on infrastructure.

Table 5.4: Islamic Banks Assets and Financing of Infrastructure Sector (Q1 2018) (USD million)

<table>
<thead>
<tr>
<th>Countries</th>
<th>Islamic banking assets (USD million)</th>
<th>Percentage of total banking assets</th>
<th>Percentage of investments in Sukuk</th>
<th>Infrastructure financing (USD Million)</th>
<th>Percentage of investments in Infrastructure Sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>21,374.84</td>
<td>5.6</td>
<td>9.0</td>
<td>1,791.51</td>
<td>8.4</td>
</tr>
<tr>
<td>Malaysia</td>
<td>172,265.39</td>
<td>30</td>
<td>13.1</td>
<td>7,538.21</td>
<td>4.38</td>
</tr>
<tr>
<td>Nigeria</td>
<td>327.20</td>
<td>0.28</td>
<td>6.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>159,131.82</td>
<td>51.1</td>
<td>8.6</td>
<td>5,955.90</td>
<td>3.74</td>
</tr>
<tr>
<td>Sudan</td>
<td>10,440.64</td>
<td>100</td>
<td>7.0</td>
<td>374.88</td>
<td>3.59</td>
</tr>
</tbody>
</table>

Source: IFSB Prudential and Structural Islamic Financial Indicators (PSIFIs)

The figures in Table 5.4 show the relatively low levels of direct investments in the infrastructure sector with an average of 4.3% of the total Islamic banking assets for the five countries investing in sukuk. While a part of the investments in sukuk is related to the infrastructure sector, the exact information is not available.

As discussed in Chapter 2, given the nature of the balance sheet, banks face certain problems in financing infrastructure projects. Since most of the liabilities of banks in the form of deposits are short-term and liquid, it becomes difficult to finance infrastructure projects that are long-term and illiquid. Furthermore, the capital adequacy regulatory requirements impose higher capital charges on long-term unsecured investments.

The liquidity concerns can be partly mitigated with a developed Islamic money market where Islamic banks can tap into these funds in case they need to. While Malaysia and Indonesia have developed Shariah-compliant instruments to manage liquidity risk, in other countries these are lacking. In countries where the Islamic money-market is not developed, such as in Nigeria, Islamic banks do not have access to liquid funds. The lack of tools to manage liquidity risk further inhibits Islamic banks from investing in infrastructure projects.

Given the above, the experiences show that a few steps can be undertaken to enhance the role of Islamic banks in long-term infrastructure investments. First, the liability side of the Islamic banks can introduce a form of restricted investment account where clients put funds for long-term investment purposes. This has been done in Malaysia where IFSA 2013 distinguishes between deposit and investment accounts. If investment accounts are structured for long-term investments, then a part of the funds can be used for infrastructure projects.
For Islamic banks, an additional problem is in the fact that in most countries their sizes are relatively small. As such, they have a limited capacity to invest in large infrastructure projects. Due to their small sizes, one option for Islamic banks is to provide project financing using syndicated finance. Examples in which this has been done include the USD 50 million provided by Islamic banks for the Master Wind Energy Limited project in Pakistan and the larger USD 422 million Doraleh Container Terminal Project financing done by Dubai Islamic Bank and others in Djibouti. Since syndicated financing involving Islamic and conventional banks requires complex contractual arrangements, there is a need to develop templates of contracts to facilitate Islamic banks to finance infrastructure projects.

Table 5.5: Policy Recommendations for Islamic Banks

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Increase Islamic banks’ roles in infrastructure investments</td>
<td>• Increase the share of financing in infrastructure projects</td>
<td>• Islamic banks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop long-term restricted investment accounts</td>
<td>• Regulatory bodies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Invest in project <em>sukuk</em></td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Provide a better supportive environment for Islamic banks to</td>
<td>• Develop a well-functioning Islamic money market</td>
<td>• Industry players</td>
</tr>
<tr>
<td></td>
<td>facilitate infrastructure investments</td>
<td>• Develop templates of Shariah-compliant contracts for syndicated financing that</td>
<td>• Relevant government ministries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>involve both Islamic and conventional banks</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Provide a better regulatory framework for capital requirements for</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>infrastructure investment</td>
<td></td>
</tr>
</tbody>
</table>

5.5. Islamic Nonbank Financial Institutions

Other sources of finance for infrastructure finance can come from a variety of nonbank financial institutions such as insurance/takaful, pension funds, and sovereign wealth funds. Although the structure of the balance of family takaful companies makes it easier for them to invest in long-term assets, the information on the asset distribution of takaful companies in the countries examined in the study do not reveal specific information on the investments in the infrastructure sector. For example, the bulk of the assets (43.7%) held by the takaful sector in Sudan is in land and real estate, followed by bank deposits (29.6%), stocks (14.9%) and sukuk (8.2%). While part of the sukuk issued by the government is likely to be used in infrastructure projects, direct investments in the sector are not revealed in the data.

A key source of funds for infrastructure projects can be pension funds. While pension funds exist in most countries, these are not Shariah-compliant. However, in some countries, parts of the investments make use Shariah-compliant instruments. For example, 45% of the AUM worth RM266.5 billion of Malaysia’s largest retirement fund EPF was Shariah-compliant in 2016, and Malaysia’s public services pension fund Kumpulan Wang Amanah Pencen (KWAP)
had a total value of RM 140.8 billion in assets in 2017 with 49.7% invested in Shariah-compliant assets.

Another potential source for Shariah-compliant funds for the infrastructure sector in some countries is sovereign wealth funds. While in most cases these funds invest in the equity of some of the key infrastructure-related GLCs, they can also raise further funds for projects by issuing sukuk. For example, the strategic investment fund created by the Ministry of Finance in Malaysia, Khazanah Nasional Berhad, had assets amounting to RM 157.2 billion in 2017 and had investments in sectors such as power, healthcare, transport and logistics, and infrastructure and construction. Other than investing in key infrastructure sectors that can promote long-term economic growth, Khazanah also plays a catalytic role in the development of Islamic finance. Similarly, Public Investment Fund (PIF), the sovereign wealth fund of Saudi Arabia has investments in many infrastructure-related companies related to the power, water utility and sewerage, telecommunications and transportation sectors.

While Islamic nonbank financial institutions can potentially play an important role in providing alternative sources of funds for infrastructure development, the key limiting factor is their size and underdevelopment. Chapter 2 shows that global takaful assets are valued at USD 42.5 billion and assets of other Islamic financial institutions are worth USD 124.4 billion. Moving forward, there is a need to develop these sectors to not only provide the relevant financial services such as takaful and pension to different stakeholders but to also accumulate funds that can be used for long-term investments.

The case of the UK shows the facilitative role that governments can play to provide a framework where nonbank financial institutions can contribute to the infrastructure sector. As indicated in Chapter 4, the HM Treasury, National Association of Pension Funds and Pension Protection Fund launched the Pensions Infrastructure Platform (PIP) that invests in the infrastructure sector. The Association of British Insurers also initiated the Insurers’ Infrastructure Investment Forum to have a platform and dialogue of how the insurance companies can invest in infrastructure projects. The governments in OIC member countries can take similar initiatives and establish a Shariah-compliant infrastructure fund in which both Islamic and conventional nonbank financial institutions can place funds for investments in infrastructure projects. The policy recommendations to increase the role of Islamic nonbank financial institutions in infrastructure development are outlined in Table 5.6.

**Table 5.6: Policy Recommendations for Islamic Nonbank Financial Institutions**

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
</table>
| 5.1 | Increase the share of Islamic nonbank financial institutions in infrastructure investments | • Enlarge the family of the takaful sector  
• Establish new, or increase the share of, the Shariah-compliant component in pension funds  
• Increase the share of the Shariah-compliant component in sovereign wealth funds | • Industry players  
• Regulatory bodies |
| 5.2 | Establish new Islamic Nonbank Financial Institutions for increasing investments in infrastructure projects | • Develop a national infrastructure bank  
• Develop national infrastructure funds/platforms | • Industry players  
• Relevant government ministries |
5.6. Capital Markets

Chapter 3 (Chart 3.7) shows that, compared to financial institutions, the capital markets are relatively less-developed in OIC member countries (with a score of 0.33 and 0.13 respectively). The relative size of the capital markets in general and the sukuk market, in particular, indicates that there is potential for the use of the Islamic capital market to raise funds for infrastructure financing. The development of the sukuk market among the countries included in this study are varied. As Chart 5.3 shows, the sukuk market is the largest in Malaysia, followed by Saudi Arabia, where the sovereign sukuk market dominates. While the Indonesian sukuk market is relatively moderate, only two sukuk for infrastructure projects have been issued in Nigeria to date. The experiences from different countries show that there is a huge demand for sukuk as seen by their oversubscription in Nigeria and the UK. This implies that there is a great potential to use sukuk to raise funds for infrastructure projects.

![Chart 5.3: Percentage of Global Sukuk Issuances (2017) (%)](image)

Source: IFSB (2018)

While a developed sukuk market can be tapped into to raise funds for infrastructure projects, Chapter 3 (Chart 3.14) shows that sukuk issuances by different infrastructure sectors (physical infrastructure, power and utilities, transportation and telecommunications) were relatively small (8.54% of the total) in 2017. To increase the potential of raising funds from the sukuk market would require not only a sound legal and regulatory framework but also the institution of supporting infrastructure and institutions. COMCEC (2018) identifies the key components of a comprehensive framework for the development of sukuk markets as being a legal and regulatory framework, market and infrastructure development, and diversified market players on supply and demand sides. The recommendations on strengthening the legal and regulatory framework are partly covered in recommendation 1.3 above.

While the recommendations for strengthening the sukuk market provided by COMCEC (2018) applies for promoting the role of Islamic capital markets for infrastructure financing, there are some additional steps that can be taken to enhance potential use. On the supply side, the costs of issuance can be a hindrance to issue sukuk since sukuk structures are complex and involve
various stakeholders to be structured. One way to resolve this problem, particularly in markets where sukuk is relatively new, is to establish an advisory company that can assist in the issuance of sukuk. A good example of such an institution is the Sudan Financial Services Company Ltd. (SFSC) established by the Central Bank of Sudan (CBOS) and the Ministry of Finance and National Economy. Among other things, SFSC provides advisory services to develop financial products including Islamic securities in accordance with Shariah rules and designs and executes a marketing policy for the issuance of sukuk. Most of the government Islamic certificates in Sudan are issued by SFSC. Since issuing sukuk is complex and costly and involves investment banks, it is suggested that a GLC similar to SFSC be established in OIC member countries which can develop standardized templates for sukuk and advise on the structuring and issuance of sukuk at lower costs. This will contribute to both the development of the sukuk market and also help raise funds for infrastructure projects.

Since the size of the Islamic financial sector is relatively small, one way to raise funds is to issue retail sukuk. Examples of retail sukuk in Malaysia and Indonesia show that the retail sector can also be tapped into to raise funds for infrastructure projects. Retail sukuk not only provides opportunities to retail investors to place funds in Shariah compliant assets, it can also potentially open up new and potentially large sources of funds for infrastructure development. Retail sukuk can also contribute to financial inclusion by providing retail investors with opportunities to invest in alternative saving instruments. However, this would require increasing financial literacy and using technology to deliver the retail sukuk product in a cost-effective and efficient manner. The policy recommendations to increase the role of Islamic capital markets in infrastructure development are outlined in Table 5.7.

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>Market and Infrastructure Development</td>
<td>• Trading platform&lt;br&gt;• Efficient registration and approval process</td>
<td>• Government and capital markets regulatory body</td>
</tr>
<tr>
<td>6.2</td>
<td>Supply Side Support for efficient issuance of sukuk</td>
<td>• Establish an advisory GLC to advise on the issuance of sukuk&lt;br&gt;• The advisory GLC can also provide templates for the issue of sukuk for infrastructure projects</td>
<td>• Relevant government ministry of capital markets regulatory body</td>
</tr>
<tr>
<td>6.3</td>
<td>Tap into retail investors</td>
<td>• Enhance Islamic financial literacy&lt;br&gt;• Introduce an efficient mechanism for the delivery/redemption of sukuk issues</td>
<td>• Relevant government ministry of capital markets regulatory body&lt;br&gt;• Islamic Financial institutions</td>
</tr>
</tbody>
</table>
5.7. Islamic Social Sector

Chapter 3 shows that there is a great potential to use the Islamic social sector to provide services to the poorer sections of the population. As indicated, the potential figures of collecting zakat in the Muslim world can be between USD 114.34 billion and USD 304.9 billion annually. Similarly, there are a huge amount of assets that are locked in waqf that can potentially generate significant returns and benefits. Given the current low status and projected huge gaps and shortfalls in the infrastructure in OIC member countries, the Islamic social sector can be tapped to provide some infrastructure services.

The country case studies show several ways in which the Islamic social sector (zakat and waqf) can contribute to providing certain infrastructure services. For example, waqf has been used in Malaysia and Saudi Arabia to provide medical services to the poor and needy. While the social sector is mostly involved in social infrastructure such as education and health services, the social sector can also use certain innovative ways to serve other infrastructure sectors. The example of BAZNAS and UNDP using zakat funds to provide a Micro Hydro Power Plant that will provide electricity to 803 households in four remote villages that did not have access to power shows the way the Islamic social sector can be used to provide infrastructure services to the deprived segments of the population.

Table 5.8: Policy Recommendations for Islamic Social Sectors

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>Use Zakat in provisions of infrastructure services</td>
<td>• Develop innovative models of using zakat to provide social, innovative infrastructure services</td>
<td>• Zakat institutions, government bodies and international organizations</td>
</tr>
<tr>
<td>7.2</td>
<td>Use Waqf in the provision of infrastructure services</td>
<td>• Develop innovative models of using waqf to provide social, innovative infrastructure services</td>
<td>• Waqf institutions, government bodies and international organizations</td>
</tr>
</tbody>
</table>

5.8. Multilateral Development Institutions

The Islamic Development Bank is the only multilateral development bank that provides Shariah-compliant financing to its member countries. The distribution of the financing provided by IDB in different regions from 2016 onwards is shown in Chart 5.4. A total of 148 projects worth USD 7.12 billion were financed by IDB. These figures indicate that the average size of the projects financed by IDB is valued at USD 48.1 million only.
While the huge infrastructure financing gap in many OIC/IDB member countries presents a great opportunity for IDB, the relatively small sources of funds available to IDB relative to the needs of its 57 members may limit the scale and scope of the funding provided to each member country. One way in which the resource constraints can be mitigated is to create Islamic infrastructure funds in which institutional investors can invest. Furthermore, funds can be created with other multilateral developmental banks. IDB has taken initiatives in the past and has launched a number of infrastructure funds and also established Islamic infrastructure funds in collaboration with Asian Development Bank. Similar initiatives can be taken with other development banks such as African Development Bank and World Bank.

Due to some factors that limit the scope of IDB to provide adequate infrastructure financing, it is recommended that an International Islamic Infrastructure Bank (IIIB) be established. In particular, IDB has various mandates related to achieving SDGs and infrastructure project financing is one aspect of its operations. Given the huge needs and gaps in infrastructure financing in OIC member countries, there is a need to have additional sources of funding for investing in the development of the infrastructure sector to meet the SDGs. Furthermore, since infrastructure projects are large and complex, OIC member countries would require advisory services in addition to financing. Establishing IIIB would not only raise funds from the market by issuing sukuk and initiating funds, it can also provide other capacity-building services to strengthen the legal and regulatory environment, provide standardized contracts and structures for Islamic syndicate financing and sukuk, and advise on structuring contracts for enhancing PPP arrangements using Islamic finance.

**Chart 5.4: Total IDB Project Financing 2016+ (USD million)**

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa-22</td>
<td>28</td>
<td>1,604.0</td>
</tr>
<tr>
<td>Middle East and North Africa-18</td>
<td>22</td>
<td>1,389.6</td>
</tr>
<tr>
<td>Asia and Latin America-9</td>
<td>19</td>
<td>2,042.5</td>
</tr>
<tr>
<td>Europe and Central Asia-8</td>
<td></td>
<td>7,123.4</td>
</tr>
<tr>
<td>OIC Total</td>
<td>148</td>
<td>7,123.4</td>
</tr>
</tbody>
</table>

Source: https://isdbdata.github.io/monograph2017.html
Table 5.9: Policy Recommendations for Multilateral Development Institutions

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>Increase resource base of IDB</td>
<td>• Increase the capital of IDB</td>
<td>• IDB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Raise funds by issuing sukuk</td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td>Raise funds from institutional investors</td>
<td>• Develop and launch Islamic infrastructure funds</td>
<td>• IDB</td>
</tr>
<tr>
<td>8.3</td>
<td>Collaborate with other multilateral organizations</td>
<td>• Develop partnerships with other multilateral development banks to create infrastructure funds</td>
<td>• IDB and other multilateral development banks</td>
</tr>
<tr>
<td>8.4</td>
<td>Establish an International Islamic Infrastructure Bank (IIIB)</td>
<td>• Establish an International Islamic Infrastructure Bank to deal specifically with infrastructure financing and related issues</td>
<td>• International multilateral organizations in collaboration with other Islamic institutional investors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Capital can be raised from IDB, member countries, Islamic institutional investors and Islamic financial institutions</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Standardize the Islamic infrastructure financing contracts and sukuk</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide advisory services on structuring Islamic infrastructure financing contracts and sukuk</td>
<td></td>
</tr>
</tbody>
</table>

5.9. Reduce Knowledge Gap and Capacity Building

Since infrastructure finance is multifaceted and new for many Islamic financial institutions, there is a knowledge gap on how Islamic finance can be used for PPP projects. This gap can be closed by increasing the awareness among stakeholders to increase the use of Islamic finance for infrastructure projects. One option is to develop detailed case studies and a data repository on Islamic PPP project financing from different parts of the world (World Bank et. al 2017). This role can be performed by either the IDB or the proposed International Islamic Infrastructure Bank. This database on Islamic infrastructure financing will be similar to the Private Participation in Infrastructure (PPI) Database developed by World Bank.

One of the key issues involving Islamic finance in infrastructure projects is in having Shariah-compliant products. Since the projects are large and involve complex contractual arrangements, there are many intricacies that need to be resolved from a Shariah point of view. However, there is a limited supply of Shariah scholars who understand the complexities of project financing and advisory services can also be costly. This problem can be resolved if templates for Shariah structures that can be used for different infrastructure projects can be made available to stakeholders to encourage them to invest in the sector. This initiative can be taken by a national Shariah board at the national level with the assistance of MDBs such as IDB that have extensive experience in project financing. At the international level, AAOIFI can develop Shariah standards for PPPs and infrastructure financing.
Table 5.10: Policy Recommendations for Reducing Knowledge Gap

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Specific Steps</th>
<th>Implemented by</th>
</tr>
</thead>
</table>
| 9.1 | Fill the knowledge gap                              | • Increase awareness among stakeholders to increase the use of Islamic finance for infrastructure projects  
                    • Develop an Islamic infrastructure finance Database                                    | • Relevant government ministries
                    • Multilateral development bank (IDB) or proposed IIIB                               |
| 9.2 | Develop Standardized Shariah-Compliant Products for Infrastructure Financing | • Develop templates for Shariah structures for PPP and financing infrastructure projects | • National Shariah board
                    • Multilateral development bank (IDB) or proposed IIIB                              |
| 9.3 | Build capacity and human capital for implementing Islamic project financing | • Develop executive training programs for Islamic PPP and infrastructure financing  
                    • Technical assistance from multilateral development organizations               | • Multilateral development bank (IDB) or proposed IIIB
                    • COMCEC                                                                              |

A related issue to developing the knowledge base is to build capacity to implement Islamic financing for infrastructure projects. This will be relevant in countries where Islamic finance is relatively new and underdeveloped such as Nigeria. To implement the capacity building would require identifying professionals with knowledge and skills related to infrastructure financing and then using them to provide specialized training to the executives of Islamic financial institutions in different countries/regions. The capacity building can be done by developing executive training programs and using technical assistance from multilateral development banks (MDBs) or the proposed International Islamic Infrastructure Bank.

5.10. Sectoral Significances in Islamic Infrastructure Finance

While the recommendations on the increase of the contributions of individual sectors have been outlined, in this section the role of the overall Islamic financial industry is examined. The case studies show that the contribution of Islamic finance in infrastructure development will depend on the characteristics and size of the sectors. For example, the smaller size of the Islamic banks and financial institutions impose limits on investments in large infrastructure projects. In countries where the Islamic banking sector is still small, using Islamic capital markets to raise funds for infrastructure appears to be a better option. The case studies show that in countries such as Indonesia, Nigeria and the UK where the Islamic banking sector is still a small component of the overall banking sector, the governments have been able to issue sukuk that were oversubscribed.
Even in countries where Islamic banking is relatively well-developed, its contribution to infrastructure projects has been limited. For example, the average direct investment in infrastructure sectors in Sudan is 3.59% and in Saudi Arabia it is 3.74%. This implies that Islamic banks are not likely to increase their direct investments in infrastructure due to regulatory reasons and short-term liquid liability structures. Although some larger Islamic banks have invested in infrastructure projects by financing tranches in syndicated structures with other Islamic and conventional banks, increasing their contribution to the infrastructure sector lies in investing in liquid tradable project sukuk.s. Investments in liquid tradable sukuk suits the balance sheet structure of Islamic banks better as reflected by the average investment in sukuk of 8.9% for sample OIC countries included in this study, which is double that of the average of direct infrastructure investments of 4.02%.

The balance sheet structures of Islamic nonbank financial institutions are better suited for investments in infrastructure projects compared to Islamic banks. However, in most countries, the Islamic nonbank financial institutions are relatively small and, as such, do not contribute much to the development of the infrastructure sector. Thus, there is a need to diversify Islamic finance to other organizational formats such as takaful, pension funds and infrastructure funds. These institutions are likely to invest in the infrastructure sector either in the form of equity or sukuk certificates.

The above discussions indicate that the development of the Islamic capital markets holds the key to the mobilization of Shariah-compliant funds for infrastructure investments. This can be done even if the Islamic banking sector is relatively small. The cases of Indonesia and Nigeria show that Islamic capital markets can be used to tap into resources to raise funds for the infrastructure sector, even though the share of the Islamic banking sector is small. Since Islamic banks are more likely to invest in project sukuk than directly invest in large projects, issuing sukuk would also increase the contribution of Islamic banks in infrastructure development. Furthermore, there is a need to increase the share of Shariah-compliant nonbank financial institutions such as family takaful, pension funds and specialized infrastructure funds.
6  Summary of the Findings and Conclusion

Most of the infrastructure projects are bulky, complex, have long-lives and require large amounts of investments with long-term maturities. The nature of the projects introduces different types of risks that can inhibit investments from the private sector. Given these features, the infrastructure sector necessitates long-term planning and the creation of a supporting environment that can create incentives for the private sector to invest. The private sector participates in infrastructure projects under the public-private partnership (PPP) framework and a concession arrangement. After reviewing the relevant literature and examining case studies from six countries, this report identifies various policies that can be undertaken to enhance the role of Islamic finance in promoting infrastructure development. This chapter presents the important issues arising in different aspects of infrastructure financing and highlights the key policies that can enhance the role of Islamic finance in promoting sustainable infrastructure development in OIC member countries.

6.1. Issues and Policies at the National Level

Most of the OIC countries have deficits in the stock of infrastructure and require investments in different infrastructure sectors. Since the gaps of infrastructure are enormous and require large amounts of investments, long-term strategies and medium and short-term plans are needed to identify the projects that will be implemented. In this regard, a pipeline of projects that are essential for the long-term economic growth of the economy needs to be identified by a government agency or public body. Moving forward, there is a need to also explore newer technologies that can be used to implement sustainable infrastructure projects that satisfy economic, environmental and social objectives.

Since infrastructure projects are large and complex, the PPP framework needs to be well structured and implemented. Other than having a separate government entity that deals with PPP arrangements, some further supporting services could reduce uncertainties and encourage private sector participation in developing infrastructure projects. These can include a public body providing advisory services on PPP implementation ex-ante and providing guarantees of execution of the PPP terms by the government after the contract is signed.

The long-term nature of infrastructure financing would also require a sound and predictable legal system that can support long-term and complex contracts. While this can be done by having an enabling concession, PPP and sector-specific laws and regulations, the public procurement regime framework should also be open, transparent and competitive. Furthermore, there has to be an enabling legal and regulatory environment for different Islamic finance sectors. This would require supportive financial laws for Islamic banks, nonbank financial institutions and capital market instruments, including sukuk, and also the changing of the tax regime to one that levels the playing field for Islamic finance. The report suggests that developing a standardized Shariah-compliant contract format that can be used in different PPP projects would be helpful in promoting the involvement of Islamic finance in infrastructure investments since this will be able to reduce contractual costs and legal risks.

The bulk of the infrastructure investments are still carried out by the government. Although government budgets allocate funds for projects, in some countries government linked companies (GLCs) are established to develop and operate different infrastructure assets. The GLCs provide infrastructure services such as electricity and telecommunications in an
economically sustainable manner. In some countries, government-linked financial institutions (GLICs) such as sovereign wealth funds or government pension funds also hold equity stakes in infrastructure project-related GLCs. Governments and infrastructure-linked GLCs also raise funds from the capital markets, including by issuing sukuk.

The study suggests the establishment of a National Islamic Infrastructure Bank (NIIB) that can mobilize funds from the private sector. The initial equity of NIIB can come from the government and GLICs, and, once established, it can raise more funds from other institutional investors by issuing sukuk and arranging syndicated financing. NIIB can also provide advisory services to facilitate increasing the financing of infrastructure by the private sector.

6.2. Issues and Policies at the Private Sector Level

The country case studies show that even though Islamic banking is the largest sector in the Islamic financial industry, they invest relatively less in the infrastructure sector (ranging from 8.4% in Indonesia to nil in Nigeria). The reasons for not investing in long-term projects include the shorter-term and liquid liabilities and higher capital requirements attached to long-term investments. While traditionally banks have used syndicated financing for projects that Islamic banks can also use, one option to encourage Islamic banks to contribute more to infrastructure projects would be to distinguish between deposits and restricted investment accounts. Unlike deposits, investment accounts tend to be longer term and the investors bear the risks of investments. These features make them more suitable for investments in infrastructure projects. The model separating deposits and investment accounts has been implemented in Malaysia under the Islamic Financial Services Act 2013 and reflects the principles of Islamic finance in a more appropriate way.

The Islamic nonbank financial institutions sector is relatively small. While certain countries have takaful operators, most of the other nonbank financial institutions such as pension funds and sovereign wealth funds are conventional or partly Islamic. Thus, the contribution of Islamic nonbank financial institutions in providing Shariah-compliant funds for infrastructure projects is small. Other than encouraging the establishment of Islamic nonbank financial institutions, it is suggested that the government initiate a Shariah-compliant infrastructure fund in which both Islamic and conventional nonbank financial institutions can place funds. This Fund can be managed by the NIIB as mentioned above.

The capital markets can be used to raise funds from different investors by both public and private entities to finance infrastructure projects. The country case studies show that there are two ways in which governments have raised funds by issuing sukuk. In some countries such as Indonesia, Saudi Arabia and Sudan, the governments have issued sukuk to raise funds to cover their budgetary expenditures, which is also used in infrastructure sectors. In other cases such as Indonesia, Malaysia and Saudi Arabia, governments and GLCs have issued project-specific sukuk.

Although capital markets can play an important role in the mobilizing of funds for infrastructure projects, the development of the sukuk market in OIC member countries is varied. For example, among the countries included in this study, Malaysia and Saudi Arabia have a large sukuk sector and countries such as Nigeria and Sudan have issued very few sukuk. There is, therefore, a need to further develop the sukuk market by providing an enabling legal and regulatory environment and a supportive market infrastructure. Since issuing sukuk is
complex and costly, involving investment banks, it is recommended that a GLC be established that can develop standardized templates for sukuk and advise on the structuring and issuance of sukuk at lower costs. This will contribute to the development of the sukuk market and also help raise funds for infrastructure projects.

A well-developed efficient sukuk market also has the potential to expand the investors’ base to include both institutional and retail investors. Retail sukuk not only opens up opportunities to raise funds from a source that is not tapped into but also contributes to financial inclusion by providing retail investors opportunities to invest in alternative savings instruments.

6.3. Issues and Policies for the Islamic Social Sector

In many Muslim countries, there are huge resources that can be collected from the institutions of zakat and waqf for providing services to the poor and the deprived. The social sector has the potential of providing some of the social infrastructure services. While the potential from these sources is great, these instruments have not been used extensively, partly because they are not organized and structured in an efficient manner. The country case studies, however, provide some examples of novel ways in which the Islamic social sector can contribute to the provision of social infrastructure services to the poor and needy. In this regard, the Waqf Al-Nur in the state of Johor of Malaysia has established hospitals for the poor, and Indonesia has pioneered the Cash Waqf Linked Sukuk which will raise charitable funds and be used for public projects such as schools and hospitals. Similarly, the micro hydro-electricity project in Indonesia jointly implemented by BAZNAS and UNDP by using zakat funds is a good example of innovative ways of using the Islamic social sector to provide infrastructure services to the deprived segments of the population.

6.4. Issues and Policies at the International Level

The Islamic Development Bank (IDB) is the only multilateral development bank that has a mandate to provide Shariah-compliant project financing. Other than using its capital, IDB also raises funds from the market by issuing sukuk to finance its activities, which limits the source of international Islamic financing for infrastructure investments. The overall Shariah-compliant funds available for 57 IDB member countries is relatively small. Since 2016, IDB has provided financing of USD 7.123 billion for 148 projects, which is an average of around USD 125 million per country, with the average size of the projects financed being USD 48.1 million only. Thus, there is a need to seek other international sources of Sharia-compliant funds.

While IDB has launched infrastructure funds and partnered with other multilateral development banks such as Asian Development Bank to seek funds for project financing, these are still not adequate and not done consistently. Thus one of the recommendations of this study is to establish an International Islamic Infrastructure Bank (IIIB) that will be devoted towards mobilizing funds and investing these in infrastructure projects. Since infrastructure projects are large and complex, the proposed IIIB will provide financing and also offer other technical assistance and advisory services to enhance the capabilities and skills needed in the development of infrastructure projects. These would include, among others, providing a framework for supportive laws and regulations and also developing contractual templates that can be used by different countries to provide Shariah-compliant financing for project financing. Finally, there is a need to increase the knowledge base and build the capacity of professionals of Islamic financial institutions to facilitate investments in the infrastructure sector.
Although Chapter 5 identifies many recommendations at different levels, the key recommendations and stakeholders who can implement them are identified in Table 6.1. Other than the first recommendation in the table that calls for the coming up with of a pipeline of innovative sustainable infrastructure projects, the recommendations are novel and focus on developing innovative models of institutional and instrument levels that can enhance the role of Islamic finance in developing the infrastructure sector.

**Table 6.1: Key Recommendations and Responsible Stakeholders**

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendations</th>
<th>Responsible Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Recommendations for the Public Sector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Identify a pipeline of innovative sustainable projects that are essential for long-term economic growth</td>
<td>Relevant government ministries or a specialized public body</td>
</tr>
<tr>
<td>2.</td>
<td>Develop standardized Shariah compliant contract templates for infrastructure projects</td>
<td>Government agencies, regulators in collaboration with Islamic Development Bank</td>
</tr>
<tr>
<td>3.</td>
<td>Establish a National Islamic Infrastructure Bank (NIIB)</td>
<td>Government establishes and provides the initial equity</td>
</tr>
<tr>
<td><strong>Key Recommendations for the Private Sector</strong></td>
<td></td>
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<tr>
<td>4.</td>
<td>Change Islamic banking law to establish restricted investment accounts in Islamic banks that can be used for longer-term investments</td>
<td>Relevant government ministry and bank regulators</td>
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<tr>
<td>5.</td>
<td>Establishment of a Shariah-compliant infrastructure fund</td>
<td>Government can form a GLC or NIIB as suggested above that will drive the establishment and operations of the fund</td>
</tr>
<tr>
<td>6.</td>
<td>Establish a GLC that can advise on the structuring and issuance of sukuk</td>
<td>Government can form a GLC that will provide the services</td>
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<tr>
<td><strong>Key Recommendations for the Islamic Social Sector</strong></td>
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<td>7.</td>
<td>Develop innovative models of using zakat and waqf for providing social infrastructure services</td>
<td>Zakat institutions, waqf institutions, government bodies and international multilateral organizations such as IDB and COMCEC</td>
</tr>
<tr>
<td><strong>Key Recommendations for the International Stakeholders</strong></td>
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<tr>
<td>8.</td>
<td>Establish International Islamic Infrastructure Bank</td>
<td>Multilateral organizations and/or large private sector entities can take the lead to initiate the process and OIC member countries can provide the initial capital for establishing IIIB.</td>
</tr>
<tr>
<td>9.</td>
<td>Build capacity and human capital for implementing Islamic infrastructure financing</td>
<td>Multilateral development organizations such as IDB, COMCEC or the proposed IIIB can provide the technical assistance for training professionals of Islamic financial institutions.</td>
</tr>
</tbody>
</table>
6.5. Concluding Remarks

The overall status of infrastructure in OIC member countries is relatively underdeveloped and will need huge investments, particularly to achieve the SDGs. Under the current trends in infrastructure investments, the estimates of deficits for the 13 OIC member countries listed in the GIHub database is USD 1.6 trillion during 2016-2040. Although traditionally infrastructure development has been the responsibility of governments, their role in filling the gaps is constrained due to budgetary restrictions and accumulated debt. The huge investments needed in the infrastructure sector require tapping into alternative sources of funding. In this regard, the private and non-profit sectors can play an important role in mobilizing resources for the development of infrastructure projects. Since the Islamic financial industry is a significant and growing sector in many OIC countries, this report explores the role that the industry can play as an alternative source of funds to contribute to the development of the infrastructure sector.

The country case studies show that the status of the infrastructure and the Islamic financial industry varies across different countries. The results reveal that even though the Islamic banking sector constitutes the largest sector of the industry, their contribution to infrastructure projects is relatively small. This is partly due to the structure of their balance sheets and also due to the regulatory regimes that discourage long-term investments. The Islamic nonbank financial institutions sector is small which limits its contribution to infrastructure projects. While the capital market can be a potentially good source of raising funds, the country case studies show that the sukuk market is not developed in some countries. The research also points out the role that Islamic social finance can play in providing social infrastructure services to the poorer sections of the population. The international sources of Shariah-compliant project financing are also few due to the limited capacity.

Given the investment gaps to develop the infrastructure sector and the limited Shariah-compliant resources used, this report provides some policy recommendations that can enhance the role of Islamic finance in the filling of the gap and lead to the development of the infrastructure sector. The key policy recommendations identified in the study can be classified into three broad categories. First, there are suggestions of creating specialized Islamic financial institutions specifically focusing on infrastructure sectors. These would include establishing national level and international Islamic Infrastructure Banks. Second, there is a need to come up with innovative instruments and models to raise funds for infrastructure projects. These include restricted investment accounts in Islamic banks, retail sukuk in Islamic capital markets, and novel models that can be used in Islamic social finance. Finally, there is a need to develop supportive institutions that can provide technical assistance and advisory services on both PPP and Islamic financing for long-term projects. Among others, these institutions could provide advisory services on PPP contracts and implementation, develop standardized contracts for project financing, and provide advice and assistance for sukuk issuance.
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